OREGON TRUST AGREEMENT PLANNING PROJECT

Potential Mitigations to the Impacts on Oregon Wildlife Resources Associated with Relevant Mainstem Columbia River and Willamette River Hydroelectric Projects

Project Cooperators

Oregon Department of Fish and Wildlife
U.S. Fish and Wildlife Service
Confederated Tribes of the Umatilla Indian Reservation
Confederated Tribes of the Warm Springs Indian Reservation
Bums Paiute Tribe
Oregon Natural Heritage Program

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U.S. Department of Energy
Bonneville Power Administration
Division of Fish and Wildlife
P.O. Box 3621
Portland, OR 97283-362 1

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Abstract

A coalition of the Oregon wildlife agencies and tribes (the Oregon Wildlife Mitigation Coalition) have forged a cooperative effort to promote wildlife mitigation from losses to Oregon wildlife resources associated with the four mainstem Columbia River and the eight Willamette River Basin hydroelectric projects. This coalition formed a Joint Advisory Committee, made up of technical representatives from all of the triis and agencies to develop this report. The goal was to create a list of potential mitigation opportunities by priority, and to attempt to determine the costs of mitigating the wildlife losses. The information and analysis was completed for all projects in Oregon, but was gathered separately for the Lower Columbia and Willamette Basin projects.

The coalition developed a procedure to gather information on potential mitigation projects and opportunities. All tribes, agencies and interested parties were contacted in an attempt to evaluate all proposed or potential mitigation. A database was developed and minimum criteria were established for opportunities to be considered. These criteria included the location of the mitigation site within a defined area, as well as other criteria established by the Northwest Power Planning Council. Secondary criteria were evaluated and accepted to prioritize the sites included in the database, and these criteria were applied to the list of 287 included projects.

Following the development and population of the database, the coalition developed strategies for evaluating mitigation costs. The wildlife species and habitats lost were adopted from the evaluations completed by the Oregon Department of Fish and Wildlife in the Willamette Basin and by the U.S. Fish and Wildlife Setice in the Columbia Basin, and published by BPA (site report loss assessments). Costs were established for general habitats within the mitigation area, based on estimates from certified appraisers. An analysis of the cost effectiveness of various types of mitigation projects was completed. Estimates of operation and maintenance costs were also developed.

The report outlines strategies for gathering mitigation potentials, evaluating them, determining their costs, and attempting to move towards their implementation.

Introduction

The 1980 Northwest Power Planning Act mandates that fish and wildlife losses resulting from development of the federal hydroelectric system in the states of Montana, Idaho, Oregon and Washington be mitigated. The Act established and charged the Northwest Power Planning Council (Council) with the task of developing a comprehensive fish and wildlife mitigation program. This program, initially adopted in 1982, was amended in 1984 and 1987 and is currently undergoing a third amendment process. The Bonneville Power Administration (BPA) is responsible for implementing the Council's fish and wildlife mitigation program.

In the early years of the program, most attention was given to anadromous fish restoration. Wildlife mitigation efforts increased when the Council adopted its wildlife mitigation rule in 1989. Highlights of the 1989 rule included:

the establishment of an interim goal for the mitigation of approximately 35% of lost wildlife habitat between 1989 and 1999;

a requirement that proposed mitigation plans be evaluated against specific Council standards;

establishment of a wildlife advisory committee made up of representatives from natural resource agencies, tribes, utilities, and conservation groups that would prioritize individual mitigation projects;

a full Council review of wildlife loss assessments and mitigation plans before implementation by BPA; and

project funding and implementation by BPA upon Council approval.

Progress toward rule implementation has been slow. The Wildlife Scoping Group, established under the terms of the Implementation Planning Process (IPP) to evaluate and rank project proposals, made recommendations to BPA regarding numerous proposed wildlife mitigation projects in 1990, 1991 and 1992. To date, however, only three wildlife projects have been implemented - acquisition of 440 acres of wetlands along the Columbia River north of Portland, 80 acres of timber rights in northern Idaho, and a large (60,000 acre) property at the confluence of the Snake and Salmon rivers in Idaho. Purchase options recently have been secured on a fourth project, and another 15 - 20 projects are currently in various stages of planning.

In 1992, BPA announced a significant change in its wildlife mitigation program. Rather than call for another round of project proposals under the IPP, BPA decided to pursue so-called ‘wildlife trust agreements” with Idaho, Washington and Oregon. These agreements have many potential advantages over the current project-by-project approach, among them speed of implementation, flexibility, the opportunity for more meaningful public input and greater on-the-ground benefits for wildlife. However, to realize those advantages, trust agreements must contain clear and concise objectives and be adequately funded to achieve these objectives.

This project reflects the effort of a coalition of affected agencies and tribes in Oregon to define those objectives and their costs.

Description of the Project Area

The goal of this project was to evaluate potential strategies for the mitigation of the impacts on Oregon wildlife resources by relevant mainstream Columbia River and Willamette River hydroelectric developments. There are four Columbia River and eight Willamette River projects which are included within this project evaluation.

Oregon Columbia River Basin Project Area

The Columbia River Basin area projects include the Bonneville Dam, The Dalles Dam, the John Day Dam, and the McNary Dam. All of these hydropower projects are along the Columbia River, along the Oregon and Washington border, and all have been considered in similar project evaluations completed in Washington state. For the purposes of this project, only Oregon losses, mitigations, habitats and wildlife were considered.

The Project Area for potential mitigations for these Columbia River projects in Oregon included all of the Hood River, Deschutes River, John Day River, Umatilla River, Walla-Walla River, Grand Ronde River, and Powder River drainages, as well as the smaller river drainages located between. In addition, portions of the Silver Creek, Silvies River and Malheur River drainages which flow south from the Blue Mountains have been included in the project evaluation area, because of their significance to the Burns Paiute Trii. A map showing the areas considered for potential mitigation opportunities is included as Figure 1.

Willamette River Basin Project Area

The Willamette River projects are those described in the 1987 Final Report, "A Wildlife Habitat Protection, Mitigation and Enhancement Plan for Eight Federal Hydroelectric Facilities in the Willamette River Basin". These are: Big Cliff, Detroit, Green Peter, Foster, Cougar, Dexter, Lookout Point and Hill Creek Dam and Reservoir projects.

The area evaluated for potential mitigation projects included any sites within the Willamette River Basin. In addition to the areas described above, all areas located along the Lower Columbia River, below Bonneville Dam, were considered for potential mitigation opportunities. These sites are displayed on the Willamette Basin map (Attachment l), and included in the Willamette Basin sites list (Appendix C). However, they are not necessarily representative of mitigation opportunities for these projects. The Joint Advisory Committee determined that these sites could potentially provide the best mitigation opportunities for the Bonneville Dam, as well as for some of the Willamette Basin projects. Therefore they were included within the overall project database. Their inclusion with the Willamette Basin Projects was done only for mapping purposes.

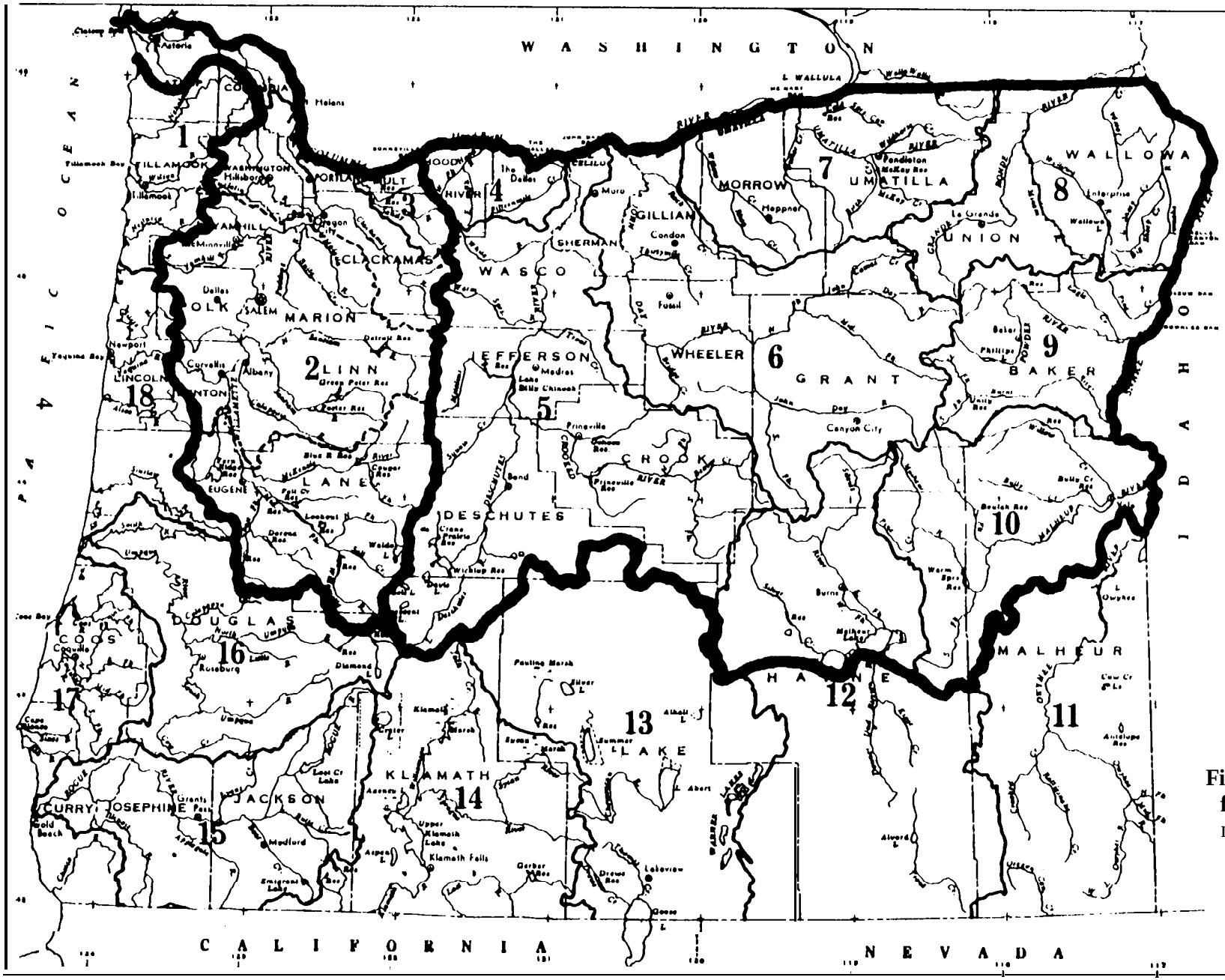

Figure 1. Area considered for potenlial mitigation opportunities.

Methods, Materials and Objectives

There were two major components to this project. First, a list of potential wildlife mitigation sites was compiled through review of existing documents and plans [e.g. site report loss assessments, Oregon wetland priority plan, Oregon Habitat Conservation Plan, Oregon Department of Fish and Wildlife (ODFW) Non-Game Plan, other ODFW species-specific plans for target mitigation species, tribal plans and priorities, and from comments from interested experts]. General priorities were established by evaluating identified sites and recommended mitigation areas against statewide vegetation and habitat maps [the Gap Analysis of the U.S. Fish and Wildlife Service (USFWS)], the state's natural heritage database, ODFW rare, threatened and endangered and sensitive species plans, identified mitigation priorities of the Council, and other sources of information. Specific attention was given to identifying mitigation opportunities on public lands associated with target species.

Once general mitigation needs and priorities were identified, criteria were developed and then applied to the list of mitigation sites. The result was a prioritized list of potential mitigation opportunities that serve three primary purposes: 1) to select representative or significant sites for detailed field analysis and habitat evaluation, 2) to provide an overall index of potential mitigation costs at high priority sites and 3) to demonstrate the type of projects suitable for selection in the mitigation process.

In the second part of the project, representative costs of mitigation, including acquisition, restoration, enhancement, and management were calculated. Costs were based on actual real estate transactions and experience in each general mitigation area, using records and data from The Nature Conservancy (TNC), USFWS, and ODFW, and professional appraisers' value estimates by habitat category and geographic area.

The process for the implementation of this planning project involved a list of tasks related to the two major objectives discussed above. The remainder of this section is a discussion of these tasks, and the methods used to complete them. Throughout this project, all of the analysis, data gathering, meetings and other work was done for all Oregon projects. However, as mentioned in the Project Area Section, the information was always separated between Columbia Basin and Willamette Basin projects. This separation was maintained only for the purpose of analyzing mitigation needs and opportunities. Criteria and methods were the same for all of the projects evaluated within this planning effort.

Objective 1: Compile a list of potential mitigation sites/areas, priorities, and activities.

Compilation of Initial List

All existing mitigation plans and proposals and other habitat related projects and opportunities were reviewed. The process involved a search of all available data sources, and an analysis of gaps in this data. The primary initial data sources included:

(1) Projects previously proposed as BPA mitigation opportunities. These included any sites identified by any of the interested tribes and agencies, as well as by the Bureau of Land Management (BLM) and the U.S. Forest Service.

(2) Sites included in Oregon Department of Fish and Wildlife's Oregon Conservation Trust Fund Plan, which were located within the project area and which provided wildlife mitigation.

(3) Sites included in the 1979 County Natural Area notebooks produced under contract to the Oregon Land Conservation and Development Commission, which were located within the project area and which provided wildlife mitigation.

(4) Sites identified by the Oregon Natural Heritage Program's wildlife portion of the Rare, Threatened and Endangered Species database (named the Element Occurrence Record database of the Biological and Conservation Data System).

The evaluation of these sources resulted in a preliminary list of 507 sites. Some of the lists included potential wildlife mitigation opportunities which were not recommended by anyone as such, including some sites in the Conservation Trust Fund Plan and the County Booklets. These included sites with wildlife benefits, as well as sites selected for other criteria, such as recreational opportunities or endangered plant or fish species protection needs. The initial list was screened only to assure that all sites were located within the proposed project area, and that all provided some wildlife mitigation potential.

Following the production of the initiai lists, major data gaps were evaluated. The most significant limitation was that of the Geographic Information System (GIS) containing the wildlife distributions, known as the Gap Analysis, was incomplete and therefore unavailable. The Gap Analysis is based on a vegetation map, which is currently in a draft stage, and associated wildlife distributions which are still being produced. This GIS system could have provided a list of high priority areas which had important wildlife diversity, as well as the most important areas to protect or restore habitat for the Target Species and Habitats of concern to this project. Eventually, when the Gap Analysis is completed for Oregon, it can assist in the evaluation of various proposed mitigations opportunities.

The second limitation had to do with the procedures for handling information on mitigation opportunities. Since the Northwest Power Planning Act was passed, many wildlife mitigation proposals have been developed by the tribes, the state and federal agencies, and other interested parties. These proposals included different amounts of detail and information. Often, different triies or agencies developed proposals for the same area or site, occasionally using different name. All of these proposals and lists of mitigation sites were prepared as reports, which make them difficult to update and compile. As a result, it was decided that a database for proposed mitigation projects and opportunities was needed.

Mitieation Opnortunities Database

A number of potential databases were evaluated for use in this process. The initial list was developed from a series of word-processing documents in a word-processing format. Since there were no databases or data systems in use by all of the cooperating tribes and agencies in the Oregon Wildlife Coalition, the Biological and Conservation Data System was chosen for this purpose. This data system, which was developed by TNC, is used by the Oregon Natural Heritage Program. It is also used in over 40 states by their heritage programs. This data system uses the software package, ADVANCED REVELATION by Revelation Technologies, which is also the database software used by the Oregon Department of Fish and Wildlife. It has the capability of transferring the information into DBASE, ASCII, and LOTUS files. The file used is the SITE BASIC RECORD file. Documentation for this file, including the fields included and the definition of these fields, and basic instructions are included as Appendix B.

Since the depth and scope of information on the mitigation opportunities varied from project to project, the Joint Advisory Committee, developed a list of the minimum variables which were to be included for all sites. These included: site name, location (Township, Range, Sections, Latitude and Longitude, County, and U.S.G.S. topographic quad map name and code), major watershed (EPA major watershed code, from Oregon Department of Water Resources map), size (including acreage if available and diameter for GIS mapping purposes), site description, mitigation type, best source of information or contact, species or wildlife present (with attention to target, Threatened, Endangered, sensitive and other species of interest) and habitats present.

Types of Mitigation Projects

The mitigation projects included in the database were organized into four groups. One division included opportunities that primarily included mitigation on public lands versus those which involve acquisition of private lands. It should be noted that private land acquisition is restricted to interested sellers, although all opportunities have been evaluated. Each of these private or public opportunities included either: a) specific sites or proposals, with fairly detailed descriptions of size and benefits of the proposed action,

or b) general areas with high potential for mitigation. For the former, detailed information on the site boundaries, wildlife and habitats were often available. For the latter, specific information was often sketchy. The general areas included river corridors and large management areas. While the information was not specific, areas were only included if there were known potential for wildlife mitigation. This included important enhancement areas in the case of public lands, or areas with large or wide-ranging potential private acquisitions.

The initial list of mitigation opportunities was greatly expanded to include any other recommended sites with mitigation potential. Recommendations were received from all of the Oregon Coalition tnis and agencies, as well as from non-members such as the U.S. Forest Service, the BLM, and the Oregon Parks and Recreation Department and non-governmental organizations such as the Trust for Public Lands and The Nature Conservancy. Many of the mitigation opportunity descriptions received were duplications or expansions of proposals already included in the database. In these cases, the file in the database was expanded to include all of the proposals. In almost all cases, mitigation opportunities were defined as broadly as possible to allow the inclusion of all available mitigation benefits present in a site or area. This was done to provide a more consistent basis for the evaluation of the large number of potentials which have been included in this process. Along with developing the list and database of mitigation opportunities, the Oregon Wildlife Coalition worked to develop criteria for the evaluation and comparison of mitigation opportunities.

Prioritization Criteria Selection

Criteria for prioritizing mitigation projects were developed through a review of existing Northwest Power Planning Council's Wildlife Advisory Committee, the Columbia Basin Fish and Wildlife Authority's Wildlife Committee, BPA's Wildlife Scoping Group, and regional agency and tribal criteria for wildlife mitigation. A total list of the criteria evaluated is included in Appendix A Criteria that addressed statutory requirements or were otherwise viewed as critical and nonnegotiable were used as a first level filter. This first level filter criteria included the following:

(1) Projects must be located within a pre-determined geographic area. A map showing the geographic limitations of consideration is included (Figure 1).

(2) Projects must complement activities of regional, federal and state wildlife agencies and tribes.

(3) Project does not impose funding responsibilities of others on BPA.

(4) Project does not adversely affect State or Federally listed Threatened or Endangered (T&E) species.

Projects that did not meet these first level filter criteria (approximately 300 projects) were removed from future consideration and prioritization.

The Joint Advisory Committee subsequently selected five additional criteria from the remaining list for use in prioritizing projects in this planning effort. These five were chosen because they represent the most important attributes to consider for wildlife mitigation. These criteria are:

(1) Directly mitigates impacts from hydropower development on-site. Score 0 or 1
- First consideration should be given high quality on-site opportunities.

(2) Protect and/or enhance high priority habitat and indicator species as adopted by the Northwest Power Planning Council.
Score: 0 or 1

(3) Protect or enhance natural ecosystems and species diversity over the long term.
Score: 1= proposal addresses either naturally self-sustaining ecosystem or species diversity, 2= previously natural self-sustaining ecosystem that needs management actions to restore it to a natural self-sustaining ecosystem that will provide species diversity, and 3= natural self-sustaining ecosystem that provides maximum species diversity.

(4) Provides a direct benefit to State or Federal listed T&E, Federal and State Candidate, or sensitive animal species. Score: 0 or 1

(5) Provide habitat benefits to both wildlife and anadromous, State Sensitive, culturally significant, or T&E fish species.
Score: 0 or 0.5

Prioritization of Projects

The above criteria were used to prioritize remaining projects in the database. The prioritization did not address land availability, proximity to other project areas (existing or proposed), or other logistical issues that might alter the standing of individual projects.

As a result of this process, an additional field was added to the database, called PRIORITY. This field included a total value, followed by the value for each of the five remaining priority criteria listed above. Values were assigned for each of these based on the best available information. The values included are not final. The criteria were applied consistently to all of the sites and reviewed by the Joint Advisory Committee. They will be revised as additional information becomes available.

Status of Current Projects and Opportunities

The database of wildlife mitigation opportunities is being maintained at the Oregon Natural Heritage Program office, at 1205 NW 25th. Ave. in Portland. A list of areas and sites is included as Appendix C. This report includes only the name of the site, the county of occurrence, acreage if known, the type of mitigation and site, the mitigation priority (based on the criteria listed above), the species and habitats of interest, and a brief site description. Additional information for all sites is included in the database. Maps showing the locations of the Willamette Valley and Columbia Basin projects are included as Attachments 1 and 2. Each site has a unique site number, which is identified in both the database report (Appendix C) and the maps.

Objective 2: Determine the Costs and Impact of Implementing Priority Mitigation Projects Identified under Objective 1.

Effectiveness **of the Various Protection Options**

In order to determine the costs and impact of mitigation, two problems had to be solved. The first was to evaluate the cost effectiveness of public land mitigation versus acquisition of private lands. The Oregon Wildlife Coalition determined that the U.S. Fish and Wildlife Service was the best agency to evaluate the effectiveness of the various protection options, including easements, acquisition and public land enhancements. The following section was provided by the Portland Field Office of the U.S. Fish and Wildlife Service.

The purpose of this objective was to identify important aspects of cost-effectiveness gained from studies or experience that would aid in selecting mitigation projects that accomplish agency and Power Act goals in the least costly manner. For example, a viewpoint expressed by some is that mitigation would be less costly if it did not involve purchase of land. Others argue that a need exists for dedicating some of the rapidly diminishing habitat base to wildlife, and that land acquisition is a cost-effective alternative.

Background

The Northwest Power Act requires, in part, that wildlife mitigation complement the activities of Federal and State wildlife agencies and appropriate Indian tribes, and that biological objectives be achieved in the least costly manner. Among other criteria added by the Northwest Power Planning Council is a statement that emphasis should be on the use of publicly-owned land. Meeting all of these criteria on a single project may present challenges.

Common wildlife habitat mitigation alternatives included the purchase of fee title, wildlife easements on private land, and enhancement of public lands. In the only known study comparing the mitigation alternatives listed above, Prose ef aL (1986) concluded that "Fee title land acquisition and subsequent management generally is more cost-effective than easements." Wildlife agency acquisition specialists have also found that it is usually more economical in the long run to purchase land for wildlife, rather than to purchase easements.

The question of cost-effectiveness is complicated under the Power Act by a continuing lack of agreement on the amount of mitigation credit warranted for values already present on acquired lands. The Prose er *al.* (1986) study based its conclusions on the relative production of new habitat values, in line with a concept of compensatory mitigation that is based on replacement of lost values. The greater the credit allowed for existing values in fee acquisition, and the greater the habitat quality present on acquired lands, the more cost-effective the land purchase becomes in general and, conversely, the less true replacement of losses results.

Aspects of the crediting issue were addressed in an agreement between the U.S. Army Corps of Engineers (Corps), Washington Department Wildlife, and USFWS on mitigation for the four lower Snake River dams. The Corps was adamant about receiving some credit for existing values on acquired land, and agreement was reached on a general 50 percent credit. Also, a primary wildlife agency goal was to increase (replace) habitat values by focusing on enhancement of lands having minimal existing values but good potential for habitat development. Guidance in the final agreement emphasized acquisition of marginal habitat with high habitat development potential, and stipulated that the 50 percent credit for existing values not be incorporated into any cost/benefit comparisons. These criteria had two important aspects. First, cost/benefit analysis would not skew selection of off-project lands towards those with existing high habitat values, thus improving opportunities for net habitat increases. Secondly, the existing values for acquisition parcels would be more limited, and thus the 50 percent credit would not be as influential in its contribution to mitigation goals.

Determining Mitigation Cost-Effectiveness

Cost per Habitat Unit (Habitat Evaluation Procedures) is a measure of cost-effectiveness (Prose et aL 1986). Cost is the sum of acquisition and management activity costs including construction, operations and management, and replacement costs. According to these authors, Habitat Units are represented by net gains from habitat response to management activities. Thus calculation of cost-effectiveness requires quantitative data for both management costs and habitat response, and estimating cost-effectiveness in advance of project implementation would require a reliable, representative database from monitored sites to make such a projection. Measurement and estimation of cost-effectiveness is difficult, and its complexity increases rapidly as the number of management activities and wildlife species considered increases.

According to Prose et aL (1986), cost-effectiveness can be influenced by the following conditions:

(1) Relative cost of land acquisition options.

(2) Management activities permissible under different land acquisition options, which affects management intensity and effectiveness.

(3) Species selected for analysis, since habitat response to management varies dependent on target species.

(4) Baseline habitat conditions such as limiting factors.

(5) Assumptions made regarding unknown habitat relationships resulting from inadequate baseline.

(6) Differences in relative administrative costs such as could occur with varying management intensity.

According to the authors, it would be difficult or impossible to make decisions regarding relative cost-effectiveness of mitigation alternatives and communicate such decisions without consideration of the above factors.

General Considerations for Acouisition and Enhancement Options

There are general considerations useful in assessing the capability of various mitigation options to achieve biological objectives. First, intensive management produces habitat value gains more cost-effectively than limited management, thus habitat is typically more responsive under fee title ownership or full dedication and management for wildlife (Prose et aL 1986). Fee ownership generally has an inherent advantage since the greatest number of habitat management activities can be implemented. With ownership, management strategies do not have to compete with conflicting commercial land uses on private land easements or with multiple use objectives on public land enhancements.

In general, easements on private lands contain stipulations that control activities and options, frequently rather severely. And easements often limit the capability to manage for certain wildlife species. In the Prose et *aL* study of the Garrison Diversion Unit, wetland maintenance (protection) was the only right obtainable with easements. This was the only management strategy possible, providing habitat benefits through loss prevention estimates. In many instances, upland species management will only be feasible through fee title purchase because of conflicting land uses.

Considerations involving the enhancement of existing public lands include the management objectives and responsibilities of the landowner (multiple-use conflicts), in

addition to biological constraints similar to those which occur for easements. Habitats on public lands are generally in better condition than equivalent habitats on private land because of more stringent legal requirements and multiple-use objectives of most public agencies (Preston er aL 1987). Because of these factors there is a more limited potential for net gains from enhancement, and very large amounts of land would be needed to significantly mitigate substantial losses.

Additional Acquisition Alternatives

Alternatives to fee title acquisition, easements on private lands, and enhancement of public lands include purchase and resale of land with covenants, and purchase with subsequent sale of easements.

Purchase and resale of land involves fee title purchase and immediate resale with title constraints that achieve mitigation objectives. Covenants may preclude land-use activities such as wetland draining or additional land conversion, or permit habitat management activities generally unavailable for easements. Revenue from resale will offset some of the cost. This seems to be a promising means of protecting certain high value resources more economically and at the same time addressing objections to fee title acquisition and the problem of management flexiiility on easement and public multi-purpose lands. It has appeal as a less costly means for more site specific protection, which then provides greater opportunity for enhancement and loss replacement in other locations.

Land purchase with subsequent sale of easements involves fee ownership but sale of easements that allow commercial activities that are compatible with wildlife management. The sale of easements also produces revenue which offsets some cost. This alternative may also offer advantages at certain locations.

Agency Policies and Practices

A thorough review of agency files indicates there is inadequate quantitative data to demonstrate the relative cost-effectiveness of acquisition options for this area of the Northwest. This is not surprising since it is not a common information need, and it also requires fairly detailed data collection and comparative analysis.

It is USFWS policy to use fee title acquisition when one or more of the following conditions apply:

(1) When a change in ownership is necessary to guarantee the future conservation of the fish and wildlife resource consistent with the mitigation goal for the specific project area; or

(2) When other means and measures for mitigation . . . will not compensate habitat losses consistent with the mitigation goal for the specific project area; or

(3) When land acquisition in fee title is the most cost-effective means that may partially or completely achieve the mitigation goal for the specific project area.

In the western states, USFWS purchases easements on private land to meet wildlife objectives, but has frequently found these to result in limited management capability.

Enhancement of existing public lands such as Forest Service or BLM land is not believed by wildlife agencies to be a very promising or appropriate mitigation alternative. A principal concern is that the multiple-use objectives of these land management agencies may compromise their ability to provide assurance for long term protection of wildlife on a given parcel of property. Additionally, the Power Planning Act prohibits using mitigation funds in-lieu of other funds to pay for activities which are the responsrbility of the agency. Acquisition of new Forest Service or BLM lands dedicated entirely to wildlife may be an appropriate use of mitigation funds.

Summary

A number of policy questions and technical factors influence the cost-effectiveness of mitigation options. These unknowns greatly limit any realistic assessment of the relative cost of various strategies on a statewide basis, at least within this study. It may be that cost-effectiveness determinations can only be made on a project-by-project basis, and only after a regional database is developed to allow comparisons to be made.

Estimated Costs of Fee Acquisition associated with Loss Assessments for the Willamette and Columbia Basin Wildlife Mitieation Projects

Acquisition Cost Estimates

The evaluation of cost effectiveness of fee acquisition versus enhancement of public lands indicates that fee acquisition provides the most effective and least expensive avenue to secure wildlife mitigation. Given this, the focus subsequently became determining fee acquisition costs associated with mitigation.

Subsequently, the Joint Advisory Committee discussed at length whether cost estimates should reflect costs per habitat unit or costs per acre. The Coalition agreed that information to develop costs per acre were readily available from appraisers familiar with land values, and through recent land transaction. Conversely, costs per habitat unit are not readily adapted from land transaction values. Accordingly, the Joint Advisory Committee agreed that costs estimates should be developed on a per acre per habitat type

There were several steps involved in making these costs estimates. First, we met with Dave Groth of Palmer, Groth and Pietka. This company specializes in land appraisals in the Northwest and is on the list of approved land appraisers regularly used by federal land management agencies. With Groth, the 14-22 habitat types noted in the loss assessments were examined, and then cross-walked them with the various land value categories commonly used in appraising real estate. Generally, the number of categories of land value were fewer than the number of habitat types, hence several habitat types were often lumped into one land class value. This was done for both the Willamette and Columbia systems. Certain habitat types, such as rocky cliffs, disturbed bare rock, and talus were identified in the loss assessments, and although the Joint Advisory Council believes these habitats have inherent wildlife value, they were not included in determining the costs to mitigate the losses. This occurred because it was impossible to assign a value or land use value to these habitats. Hence, these losses are not accounted for in these estimates of costs to mitigate.

Similarly, the loss assessments identified over 41,000 acres of lost open river habitats along the Columbia River. However, despite the inherent wildlife values associated with open river habitats, they were not included in the cost estimates for mitigation because it was not possible to assign a land value to open river. Conversely, in the Willamette system, open river habitats were much more limited in area1 extent, and due to their smallness, the loss for open river habitats here were included in costs estimates to mitigate for riparian habitat.

We then instructed Dave Groth to develop cost estimates for each system (Willamette and Columbia) on a per acres basis for each category of land. Recognizing the difficultly in assigning specific "average" values, we agreed that Groth would develop a range of costs per acre for the various land class categories for each system. We took Groth's estimates of land class categories and submitted these values for review to Joe Friedman (Friedman and Associates) and William Smith (William Smith Properties). Both Friedman and Smith concurred that Groth's values reflected good approximations of current land values.

Dave Groth did not provide values associated with standing merchantable timber. Clearly, seven or more of the habitat types involve land with significant timber value. Accordingly, we contracted with Jim Hildreth of Woodland Management to determine this value. Hildreth provided values for the different types of timber based on January 1993 prices. While timber values have varied greatly over the last five years, these values are an accurate reflections of current replacement costs. This values will likely increase over time. Also, for the agricultural habitats, costs estimates did not included any value associated with the standing crops. This is most significant in the case of certain orchards.

With these land and timber values in hand, we added up the loss assessments for each habitat for all projects within each system (Willamette and Columbia). This provided the total number of acres lost per habitat in each system. These habitat losses were then

grouped according to the class of land values utilized by Groth, and with Groth's estimates of cost per acre, the total amount needed to mitigate for these losses was determined. The loss assessments documented various values for losses and gains related to open water in reservoirs and open water in rivers and canals. These gains or losses were not factored into the cost estimates because of difficulties in estimating the value and dollar amount associated with open water.

Operations and Maintenance Cost Estimates

Cost estimates associated with operation and maintenance (0 & M) were developed. We based these estimates on actual costs incurred by the Oregon Department of Fish and Wildlife in managing their wildlife management areas (WMAs). We segregated ODFW's wildlife areas into those east and west of the Cascades, and further subdivided each category into upland areas and wetland/riparian areas. We used the following WMAs to project 0 & M costs. We then compared these 0 & M costs with values provided by the USFWS. We did not specifically factor in costs associated with monitoring and evaluation. We believe these costs can be included in annual 0 & M estimates.

Columbia System Upland Habitats
Wenaha WMA
Elkhom WMA
Murderers Creek WMA
White River WMA
Lower Deschutes WMA

Columbia Systems Wetland Habitats
Klamath WMA
Ladd Marsh WMA
Summer Lake WMA

Willamette System Upland Habitats
Jewel1 WMA
Denman WMA

Willamette System Wetland/Riparian Habitats
Fern Ridge WMA
Sauvie Island WMA

Results and Discussion

Potential Mitieation Opuortunities

A total of 267 potential mitigation sites or areas are currently included in the database. An additional 14 sites are in the process of being entered into the database. The list of sites provided (Appendix C) includes only summary information. The database can be used to select representative, high priority sites for evaluation by any cf the tribes or agencies in the administration of a mitigation trust agreement. It can be modified if additional criteria are developed, if additional information on sites or areas are obtained, or if the overall mitigation plan for Oregon involves more than one tribe or agency administered trust.

The Joint Advisory Committee has determined that it is not currently advisable to select a finite list of priority mitigation sites or projects. There were a number of reasons for this. The first was the realization that it is simply not possible to evaluate all of the potential mitigation opportunities. Secondly, it was noted that a number of selection and prioritization tools, such as the Gap Analysis and regional biodiversity plans were currently not available. Finally, developing absolute project priorities was found to be extremely difficult since the financial resources for mitigation were not known.

The inclusion of a specific site on a mitigation priority list has the potential of altering (increasing) the value of a piece of property. Because of this, the coalition included priority areas as well as specific sites and opportunities. The goal was to include important opportunities which would be available in an area, and allow any interested private landowner to approach the mitigation trust with a specific parcel within this area. This would allow the tribe or agency to select the best opportunity without being restricted to a specific property.

As a result, the coalition developed a strategy which involved the creation of a database of potential mitigation opportunities. This database is being maintained at the Oregon Natural Heritage Program, and will be continuously updated throughout the mitigation process. Also with this database, criteria were selected which would allow for the prioritization of sites. This was critical because the hope is to develop a site selection or evaluation mechanism which could be nested within other existing criteria established by broader trusts.

Costs of the Potential Willamette Basin and Lower Columbia Mitigation Projects

Willamette Basin

The wildlife and wildlife habitat loss assessments for the eight projects within the Willamette Basin identify 14-22 different habitats for which there are losses on a per acre basis, including 7 forest types and as many as 14 other non-forest habitats. We examined all habitats delineated in the loss assessments, and cross-walked them to fit various land value categories provided by Palmer, Groth and Pietka (Table 1). **Actual** land values per acre per category of land provided by Dave Groth are summarized in Table 2. And values of merchantable timber generated by Woodland Management are also provided in Table 2.

We then compiled losses for all eight projects, and using the land values categories from Palmer, Groth and Pietka, projected the total amount needed to replace these losses per habitat within the Willamette Basin. We then added in cost/values of merchantable timber on forest lands. These total losses by habitat and replacement costs are summarized in Table 3. Total costs associated with replacement of wildlife losses for the Willamette Basin hydroelectric projects is approximately 20 to 40 million dollars in land value, and 174 million dollars in replacement timber costs, equating to a total value **of** replacement at an estimated $195.5 million to $215 million.

Table 1. Willamette Basin - Vegetation Cover Type and Associated Land Value Used to Determine Replacement Costs.

Vegetation Cover Type (described in loss assessment)	Land value category
FOREST TYPES	
Temperate conifer forest open pole	same
Temperate conifer closed pole	same
Temperate conifer-open sawtimber	same
Temperate conifer-closed sawtimber	same
Temperate conifer-old growth	same
Conifer/hardwood-open	same
Conifer/hardwood-closed	same
NON-FOREST TYPES	
Deciduous hardwoods (oaks)	Oak hardwoods/Oak Savannah
Oak Savannah	"
Red alder	Alder-shrub
Shrubland	"
Grass-Forb	"
Riparian Shrub	Riparian
Riparian Hardwood	"
Sand/gravel/cobble	"
River	"
Ponds	"
Herbaceous wetland	"
Agricultural cropland	same
Agricultural orchard	same
Agricultural pasture	same

Table 2. Typical Market Value of Land by Land Use Category in the Willamette Basin, Oregon,

1993. Values provided by Palmer, Growth and Pietka, and reviewed by Friedman and Associates, and Smith Properties. Values for Merchantable Timber provided by Woodland Management.

Land Value Category	Typical Market Value Range per acre	Value Merchantable Timber per acre
FOREST TYPES		
Conifer open pole	$200-400	$ 500
Conifer closed pole	$200-400	$ 1,500
Conifer-open sawtimber	$200-400	$ 5,000
Conifer-closed sawtimber	S2o0-400	$ 9,000
Conifer-old growth	S2oo-400	$ 30,000
Conifer/hardwood open	S2oo-400	$ 3,000
Conifer/hardwood closed	S2oo-400	% 4,000
NON-FOREST TYPES		
Oak hardwoods	$ 500-800	
Alder shrub	$200-400	
Riparian	$2ooo-2500	
Ponds	$2ooo-2500	
Agricultural cropland/orchard'	$2ooa-2500	
Agricultural pasture	$ 900-1300	

[1] Agricultural cropland and orchard values represent the value of the land. It does not include the value of any standing crops or orchard trees.

Table 3. Willamette Basin - Cost to Replace Losses by Habitat

Habitat Type	# acres lost	$ per acre	Replacement $	Timber $ per acre	Total Costs
FOREST TYPES					
Conifer open pole	1,237	200-400	247,400 - 494,800	500	865,900 - 1,113,300
Conifer closed pole	914	200-400	182,800 - 365,600	1,500	1,553,000- 1,736,600
Conifer open sawtimber	1,547	200-400	309,400 - 618,800	5,000	8,044,400 - 8,353,800
Conifer closed sawtimber	376	200-400	75,200 - 150,400	9,000	413,600 - 488,800
Conifer old growth	5,361	200-400	1,072,200 - 2,144,400	30,000	171,552,000 - 182,274,000
Conifer/hardwood open	127	200-400	25,400 - 50,800	3,000	406,400 - 431,800
Conifer/hardwood closed	80	400-400	16,000 - 32,000	4,000	336,000 - 352,000
NON-FOREST TYPES					
Oak hardwoods/oak savannah	109	500-800			54,500 - 87,200
Alder shrub	5,339	200-400			1,067,800 - 2,135,600
Riparian	3,994	2000-2500			7,988,000 - 9,985,000
Agriculture cropland/orchard	1,254	2000-2500			2,508,000 - 3,135,000
Agriculture pasture	780	900-1300			702,000 - 1,014,000
Total Replacement Cost (without timber)			$ 20,852,900 - $ 40,630,100		
Replacement Cost of Timber			$ 174,639,500		
TOTAL COST REPLACING ASSESSMENT LOSSES			**$ 195,492,400 - $ 215,269,600**		

Columbia Basin

Table 4 lists all habitats delineated in the wildlife and wildlife habitat loss assessments for the Bonneville, The Dalles, John Day and McNary dams, and cross-walks them to the land values categories provided by Palmer, Groth and Pietka for the Columbia Basin. The loss assessments break out acres for islands and acres for the mainland per habitat, but since the description of these habitats in the loss assessments are combined, and replacement opportunities will come from sites primarily associated with the mainland, we have likewise combined them in costing out their value. Also, while the loss assessments for the Willamette Basin describe Agricultural lands by various category (rowcrop, orchard, pasture etc), the Columbia Basin simply lumps them all as Agricultural lands. In the description of Agricultural Lands in this basin, it states briefly that agricultural lands from The Dalles dam east were primarily orchards, while those to the west (e.g. Bonneville) were primarily pasture. Since land values for orchards and pastures are different, we have broken out the Bonneville pasture agricultural lands from the other three dams which were calculated as orchard agriculture.

Table 5 provides typical market value associated with the various categories of land use as provided by Palmer, Groth and Pietka, as well as the value of merchantable timber associated with each forest class.

Using total number of acres loss per habitat type as documented in the loss assessments, we then multiplied these losses by he values per acre per habitat provided by Palmer, Groth and Pietka, incorporating timber values provided by Woodland Management for forest lands. These total losses by habitat and replacement cost are summarized in Table 6. We estimate that replacement costs for the Columbia Basin system losses attributed to hydroelectric development to be $16,254,000 to $27,242,775 for the land, with additional costs of $1,788,500 required to replace lost timber value. Total costs of land and timber together are approximately $18 million to $29 million dollars based on 1993 values.

Table 4. Columbia Basin - Vegetation Cover Type and Associated Land Value Used to Determine Replacement Costs.

Vegetation Cover Type (described in loss assessment)	Land Value Category
Conifer Forest open	same
Conifer hardwood forest open	same
Conifer hardwood forest closed	same
Shrub	shrub steppe juniper
Grassland	"
Shrub steppe-juniper	"
Riparian hardwoods	riparian
Riparian shrub	"
Riparian herb	"
Emergent wetland	"
Sand gravel cobble mud	"
Agricultural lands Bonneville	dry land farming
Agricultural lands other dams'	row crop/orchard
Sand dunes/blowouts	sand dunes

[1] Agricultural cropland and orchard values represent the value of the land. It does not include the value of any standing crops or orchard trees.

Table 5. Typical Market Value of Land by Land Use Category in the Columbia Basin, Oregon, 1993. Values provided by Palmer, Growth and Pietka, and reviewed by Friedman and Associates, and Smith Properties. Values for Merchantable Timber provided by Woodland Management.

Land Value Category	Typical Market Value Range per Acre	Value Merchantable Timber per acre
FOREST TYPES		
Conifer open	$ loo - $225	$ 4,500
Conifer closed	$ 100 - $225	$ 8,000
Conifer-hardwood open	$ 100 - $ 225	$ 2,500
Conifer-hardwood closed	$ 100 - $ 225	$ 3,500
NON-FOREST TYPES		
Shrub steppe/juniper	$ 50 - $ 100	
Riparian hardwood	$ 500 - $ 1,000	
Riparian shrubland	$500 - $1,000	
Riparian herb	$500 - $ 1,000	
Emergent wetland	$500 - $ 1,000	
Sand/Gravel	$500 - $1,000	
Agricultural cropland/orchard	$ 2,000 - $ 2,500	
Agricultural pasture	$ 900 - $ 1,300	
Dunes	500	

Table 6. Columbia Basin - Cost to Replace Losses by Habitat

Habitat Type	# acres lost	$ per acre	Replacement $	Timber $ per acre	Total Costs
FOREST TYPES					
Conifer open	175	100-225	17,500 - 39,375	500	105,000 - 126,875
Conifer closed pole	651	100-225	65,100 - 146,475	2,500	1,692,600 - 1,773,975
Conifer open sawtimber	21	100-225	2,100 - 4,725	3,500	75,600 - 78,225
NON-FOREST TYPES					
Shrub steppe/juniper	22,142	50-100			1,107,100 - 2,214,200
Riparian hardwood shrub herb emergent wetland sand/gravel	13,751	500-1,000			6,875,500 - 13,751,000
Agriculture cropland/orchard (The Dalles, John Day, & McNary)	4115	2,000-2,500			8,230,000 - 10,287,500
Agriculture pasture (Bonneville)	615	900-1,300			553,500 - 799,500
Dunes	2553				1,276,500
Total Replacement Cost (without timber)			$ 16,254,100 - $ 27,242,775		
Replacement Cost of Timber			$ 1,788,500		
TOTAL COST REPLACING ASSESSMENT LOSSES			**$ 18,042,600 - $ 29,031,275**		

Operations and Maintenance Costs

In addition to acquisition costs, we have provided estimates of costs associated with operation and maintenance of acquired lands (Table 7). We derived these estimates by examining actual 0 & M costs from wildlife management areas owned by the Oregon Department of Fish and Wildlife, and from the Umatilla National Wildlife Refuge. These 0 & M costs can be broken out to provide a spectrum of costs associated with general habitat types. To facilitate this effort, we lumped ODFW's twelve management areas as either upland or wetland, and further subdivided as to being west of the Cascades as representative of the Willamette Basin, and east of the Cascades as representative of the Columbia Basin. These 0 & M costs account for the whole range of wildlife area activities, including personnel, services, supplies and overhead. Major capital expenditures (e.g. heavy equipment, buildings and vehicles) are not included herein, as these are purchased infrequently and are difficult to incorporate into average costs per acre. However, these do represent potential major expenses, which could raise the average cost as much as $10.00 per acre.

Table 7. Operations and Maintenance Costs for Wildlife Habitat Using ODFW's WMA

	Upland	Wetland
Columbia Basin average cost per acre (range)	$17.21 (8.33-59.00)	$21.44 (13.10-57.60)
Willamette Basin (range)	$26.44 (11.28-104.10)	$47.32 (46.78-48.53)

In the Willamette Basin, we grouped all forest habitat types in Table 1 with oak hardwoods/oak Savannah habitats, and considered these as uplands, and grouped the remaining non-forest habitat types as wetlands. Accordingly, for the Willamette Basin, there were 9751 acres of upland habitat with projected average annual 0 & M costs of $257,816 annually. There 11,360 acres of wetlands lost, and when replaced will have projected annual average 0 & M costs of $537,555. Total 0 & M costs for the Willamette Basin are $795,371 annually.

In the Columbia Basin, we grouped all forest habitats and the shrub, grassland and shrub steppe-juniper habitat types as upland, the other habitats as wetland (see Table 4). Accordingly, there were 22,989 acres of upland and 21,034 acres of wetland, with

projected annual 0 & M costs of $607,829 and $995,328, respectively. Total annual 0 & M costs for the Columbia Basin are $1,603,157 annually.

We subsequently compared these average 0 & M values for lands managed with information provided by the USFWS for the Umatilla NWR, and for proposed Washington Department of Game projects at the Vancouver lowlands and in northeast Washington. At Umatilla NWR, average annual 0 & M was $14.50 per acre, somewhat less than values for ODFW managed lands. For Vancouver lowlands, 0 & M costs for uplands were $100 per acre, while wetland-riparian costs approximately $26 per acre. In northeast Washington, upland 0 & M costs ranged from $22.50 per acre for shrub steppe to $97 per acre for agricultural lands, compared to $26 per acre for riparian habitats.

These comparisons indicate that 0 & M costs are variable, but that values used by ODFW are within the range of values for 0 & M as estimated by the USFWS.

A trust settlement would need to provide an amount specifically set aside to endow the 0 & M of the projects in Oregon. Given that annual 0 & M costs are $1.6 million for the Columbia Basin approximately $800,000 for the Willamette system, total annual costs would be approximately $2.4 million. Based on projected 8% average annual yield, the endowment for annual 0 & M costs would need to be $30 million.

Estimated Costs of Evaluation and Monitoring for Implementing Wildlife Mitigation

The Oregon Wildlife Coalition has not yet determined actual costs required for evaluating and monitoring implementation of mitigation.

Total Estimated Costs of Wildlife Mitigation

Total costs of wildlife mitigation are:

Columbia Basin Replacement Costs	$ 18,042,500 - 29,031,275
Willamette Basin Replacement Costs	$ 195,492,400 - 215,269,600
0 & M Endowment	$ 30,000,000
E & M	unknown
Total	**$ 243,534,900 - 274,300,875**

Summary and Conclusions

Options for mitigating Oregon's wildlife losses from the Willamette Basin and Lower Columbia hydroelectric dams have been evaluated. Oregon has elected to pursue a wildlife mitigation trust agreement. The framework for this trust is the Oregon State Conservation Trust Fund, administered by the Oregon Department of Fish and Wildlife (ODFW). and similar trusts established by the affected Oregon tribes. These groups. which include the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Indian Reservation, the Burns Paiute Tribe. the ODFW. and the U.S. Fish and Wildlife Service (USFWS), have established the Oregon Wildlife Coalition to move this mitigation effort forward. The Oregon Wildlife Coalition and BPA have cooperated in this effort. by forming the Joint Advisory Committee. composed of technical representatives from all of the Coalition tribes and agencies with staff support from the Oregon Natural Heritage Program.

The Oregon Wildlife Coalition hoped that a coordinated state-wide planning effort would result in the greatest overall benefits to the wildlife resources. Project coordination at this level provides an opportunity to address mitigation on more of an ecosystem level -- taking into account the relationships between migratory corridors. breeding. resting and feeding areas. It provides the ability to assess the role of a project in relation to other proposed and existing projects. to both improve benefits to wildlife and to increase management efficiency.

The result of this effort was a database of mitigation opportunities in Oregon. The database includes specific mitigation sites as well as more general mitigation areas. Opportunities for mitigation on public land (enhancement or restoration of habitat) are included as are potential acquisitions of private lands. Criteria were developed to assist ranking the sites and areas, and these criteria were applied consistently to all of database entries. The criteria and opportunities in the database can be updated with new information, which can include newly developed analytical tools for wildlife protection planning. such as the gap analysis. The objective of the criteria was to provide the best mitigation possible for all wildlife species. while replacing the wildlife losses established in the Wildlife and Wildlife Loss Assessment studies.

The next step in the process involved estimating overall mitigation costs. The Joint Advisory Committee determined that fee acquisition was more cost effective than easements. It was felt that mitigation on public lands often provided opportunities for the best in-place mitigation. hence no potential mitigation types were excluded from evaluation. Because of the complications that may limit the use of public land for mitigation. the evaluation of overall costs relied on the cost of potential acquisition.

The strategy to develop potential costs involved several steps. First. technical representatives of the Joint Advisory Committee and a professional land appraiser assessed all of the habitats described in the loss assessments for both the Columbia and Willamette Basins. These habitat types were then linked to land use categories generally

used to determine land value by appraisers. The land appraiser, Dave Groth of Palmer. Groth and Pietka, then developed a range of values associated with these land use categories. Using these values. the technical staff was able to derive a range of values on a per acre basis for all habitats delineated in the loss assessments for each basin. The per acre value for each habitat was multiplied by the number of acres lost for each habitat type, providing a total dollar value for each habitat type. The sum of costs for all habitat types provided the total cost of mitigation for each basin. These values were confirmed by a second independent source.

Woodland Management provided market values for the timber associated with the habitats and categories of land use. The timber value was then incorporated into the final value on a per acre basis for each habitat as noted in the loss assessments.

It is important to recognize that these estimates of cost to mitigate represent a range in values, and that exact costs of individual sites may vary considerably. This will be particularly true for sites proximal to urban growth boundaries in the Willamette Valley, where land values will be considerably greater than the included estimates.

The Operations and Maintenance (0 & M) estimates were derived from actual costs incurred by ODFW for wildlife management areas, and verified based on estimates by the USFWS and the Washington Department of Game. These costs provide reasonable estimates as they reflect the type of management activities generally associated with wildlife management in Oregon. Management areas were divided into those with upland and wetland emphasis, and likewise the prescribed habitats in the loss assessment were classified either upland or wetland. The 0 & M costs per acre of wetland or upland were then multiplied by total losses for each habitat type. The 0 & M costs for upland and wetland sites were then summed, providing a final costs estimate for Operation and Maintenance. Again, these 0 & M costs are projected estimates based on 1993 budgets. Funds necessary for management in perpetuity will require calculation of inflation factors over time.

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Appendix A. Criteria Evaluated at the Joint Advisory Committee Workshop

WILDLIFE SCOPING GROUP DEFINITIONS - CRITERIA

Bonneville implementation. Bonneville shall implement Council-approved mitigation priorities and plans at federal projects through the implementation planning process. In that process, Bonneville will invite proposals for specific measures to achieve the mitigation priorities approved by the Council. Proposed measures will include estimates of capital, operations and maintenance funding needs. In reviewing proposals, the implementation planning process will consider the extent to which proposals would:

(A) Complement the activities of the region's state and federal wildlife agencies and Indian tribes:

Documented evidence of complementing to include all pertinent federal and the region's state fish and wildlife agencies, and appropriate Indian Tribes. Agencies and tribes will determine and explain complementarily. Scoping group will assign points to the agencies' and tribes decisions. Points: 0 = no evidence of complementarily, and 3 = documentation of complementarily from all pertinent entities. STATUTORY

(B) Be the least costly way to achieve the biological objectives;

Where equally effective alternative project proposals for achieving the same sound biological objectives exist, the proposal with minimum cost will be given priority consideration. Proposal should demonstrate cost-effectiveness where alternative(s) exist. Points: 0 = less cost-effective, 3 = the same, and 3 = more cost-effective. STATUTORY

(C) Protect or enhance special habitat or species that would not be available unless prompt action is taken; such proposals should be implemented only with the consent of the Council;

Is project a lost opportunity? Yes [ ] No [ ]. Will require Council consent.

(D) Encourage the formation of partnerships with other persons or entities, which would reduce project costs, increase benefits and/or eliminate duplicative activities;

Partnerships, reduce cost, increase benefits, or eliminate duplicative activities. Points: 0 = no evidence, 1 = anticipated or possible partnerships, and 3 = written documentation from partners and/or demonstrated commitment.

(E) Have measurable objectives, such as the restoration of a given number of habitat units;

Does the end product of the proposal have measurable objectives, such as Habitat Units and/or species response to actions? Points: 0 = not measurable, and 3 = measurable.

(F) Not impose on Bonneville the funding responsibilities of others, as prohibited by section 4(h)(10)(A) of the Northwest Power Act (if in lieu of is determined, this project will not be considered);

Wildlife mitigation expenditures shall be in addition to, not in lieu of, other expenditures authorized or required from other entities under other agreements or provisions of law. Points: 0 = in lieu of, and 3 = not in lieu of. STATUTORY

(G) Address special wildlife losses in areas that formerly had salmon and steelhead runs that were eliminated by hydroelectric projects (for example, societal and tribal wildlife losses);

The mitigation project that will be credited towards the dam and reservoir. Points: 0 = no blockage of anadromous fish by a dam, 2 = Dworshak Dam and Willamette (some projects) where anadromous fish make it to the base of the dam, and 3 = Blockage of anadromous fish by a dam.

(H) Protect high quality, native, or other habitat or species of special concern, whether at the project site or not, including endangered, threatened, or sensitive species. Document status of the species. Compatible with T&E recovery plans.

For the main objective of the mitigation project. Points: 0 = does not address points listed below, 1 = historical potential and restorable, 2 = high quality native habitat without Threatened, Endangered, or Sensitive Species, and 3 = high quality native habitat that host Threatened, Endangered, or Sensitive Species, or Species of Special Concern.

(I) Provide riparian or other habitat that may benefit both fish and wildlife;

For resident and anadromous fish. Points: 0 = no benefit to fish, 1 = incidental benefits, 2 = secondary benefits, and 3 = immediate benefits.

(J) Address concerns over additions to public land ownership and impacts on local communities, such as reduction or loss of the local economic base; or consistency with local governments' comprehensive plans;

Points: 0 = does not demonstrate tangible effort to address concerns, and 3 = does demonstrate tangible effort to address concerns.

(K) Use publicly-owned land for mitigation, or management agreements on private land, in preference to acquisition of private land, while providing permanent protection or enhancement of wildlife habitat in the most cost-effective manner (explain why proposal is or is not cost effective);

Points: 0 = nonpermanent protection and/or fee-acquisition not cost-effective, 2 = fee=title acquisition that is cost-effective, 2 = combination of fee-title acquisition and (permanent easement and/or management agreement), 3 = permanent easement on private land that is cost-effective, and 3 = permanent enhancement of public land that is cost-effective.

(L) Mitigate losses in-place; in-kind, where practical. when a wildlife measure is not directly related to a hydroelectric-caused loss, the habitat units protected, mitigated or enhanced by the measure will be credited against mitigation due for one or more hydroelectric projects, including power-related storage or regulatory dams;

"In-place" mitigation in the vicinity of the reservoir. "Out-of-place" is biologically, physically or political not practical to mitigate in the vicinity of the reservoir. "In-kind" is habitat type or target species impacted by the reservoir. "Out-of-kind" is habitat type or target species not impacted by the reservoir. Points: 1 = out-of-kind or not practical in-kind, 2 = in-kind and out-of-place, but is practical in place, 3 = in-kind and out-of-place, but is not practical in-place, and 3 = in-kind and in-place.

(M) Help protect or enhance natural ecosystems and species diversity over the long term;

Points: 1 = proposal addresses either naturally self-sustaining ecosystem or species diversity, 2 - previously natural self-sustaining ecosystem that needs management actions to restore it to a natural self-sustaining ecosystem that will provide species diversity, and 3 = natural self-sustaining ecosystem that provides maximum species diversity.

(N) Are based on, and supported by, the best available scientific knowledge: and

Biologically possible. Points: 1 = low confidence, 2 = medium confidence, and 3 = high confidence.

(0) Address achieving the Council's mitigation priorities (see attached sheet).

Power Council's sub-basin priorities (upper Columbia, lower Columbia and Snake River), including habitat types, target species and Habitat Units. Points: 1 = low priority, 2 = medium priority, and 3 = high priority.

ADDITIONAL CRITERIA DEVELOPED AT OREGON COALITION WORKSHOP

Use high priority habitat types as adopted by the Power Planning Council and their associated indicator.

Provide protected migratory corridors

Associate of habitat types and how they compliment each other

Spacial distribution to provide better distribution of habitat types to address habitat fragmentation.

Existing high quality habitat in immediate danger of loss and destruction are high priority, provided threats can be quantified.

Benefits of wildlife habitat to location of tribal use areas.

Availability of water rights.

Additional benefits or detriments due to human use (interpretation used as a management tool, versus potential costs of human management). Provide interpretation areas to protect existing management areas.

Prioritize production areas versus resting areas. Habitats which meet critical life needs rather than harvest opportunities.

APPENDIX B: BP.4 Mitigation Database (SITE BASIC RECORD tile of' BCD) Documentation

The SITE BASIC RECORD (SBR) file contains scientific and ecological information on various Sites in the landscape. These include especially Conservation Sites. Exchange Land Sites. and Managed Area Equi-sites. (See below for explanations of these different types of Sites). Each record in the SBR file describes a particular site. it's location class (size). design (if pertinent). biological significance. as well as any real estate. protection. and stewardship concerns and all Element Occurrences present on the Site. An SBR record may be created for any Site. regardless how or for what purpose the Site's boundaries are drawn. Whether a Site's boundaries are determined by field survey. by conservation design. by land-use planning. or by default equivalency with existing Tractor Managed Area boundaries. each Site is always defined fundamentally as a landscape unit of' scientific and ecological description. Although in some cases a Site may be bound by the exact same land area as a Tract or Managed Area. the definition of a Site distinguishes the SITE BASIC RECORD (which contains scientific and ecological information) from a TRACTS record (which contains legal interest and ownership information) and the MANAGED AREA BASIC RECORD (MABR) (which contains management information). Consenation Sites. Exchange Land Sites. and Managed Area Equi- sites constitute the majority of Sites included in the SBR file. These different kinds of Sites are explained in detail below:

CONSERVATION SITES---SBR records are most commonly created for the purpose of identifying and characterizing areas of land to be protected. These areas. known as Conservation Sites. are fundamentally conceptual in nature. Their boundaries are determined and mapped according to conservation design (i.e. according to biological and ecological considerations). Any overlap with existing legal boundaries may be purely coincidental. If the legal boundaries of a Tract extend beyond the ecological boundaries of a Conservation Site. then that portion of the Tract outside of the Site boundary should be considered "trade land" acreage. The total trade land acreage for all Tracts associated with the Site may be entered in the TL_ACRES field. Trade lands on Tracts which are not directly associated with Conservation Sites should not be included in the SBR tile. As a unit of conservation planning Conservation Sites provide a means for describing areas of' land with proposed yet incomplete levels of protection. In this context. Sites are distinct from Managed Areas which are already under some formal. unified (and often legal) level of protection or stewardship. Conservation Sites may be construed as the conceptual forerunners of' future Managed Areas. Therefore until a Site (or a part of the Site) has been protected A MANAGED AREA BASIC RECORD should not be completed. Once all the Tracts in a Site are protected. the boundaries of the completed Managed Area (or assemblage of Managed Areas) should coincide with (or extend beyond) the original Conservation Site boundaries. Although the Site and the Managed Area may occupy the same geographic area. the conceptual distinction between the Site (a unit of conservation design) and the Managed Area (a unit of land management) should not be lost. This is especially important when it is necessary to create an MA Equi-site record for a previously established Managed Area (eg. a National Forest established independently of Heritage preserve selection and design work).

MANAGED AREA EQUI-SITES---A Managed Area Equi-site (also MA Equi-site) is a Site whose boundaries perfectly coincide with (i.e. are equivalent to) those of an existing Managed Area. In other words. a Managed Area and a Managed Area Equi-site circumscribe the very same land area. The terms differ however in what they imply (or describe) about that area. The purpose of the MA Equi-site is to provide a usefulmeans for referring to scientific and ecological information about a Managed Area. Whereas management information is already conveniently tracked in a MANAGED AREA BASIC RECORD (MABR). the concept of an MA Equi-site makes it possible to track related scientific information about the area in a corresponding SBR record. Theoretically. any existing Managed Area (such as a National Forest) would have management information in an MABR record and scientific information for the exact same area in a corresponding SBR record (called the "MAEqui-site record"). In some cases. a Managed Area mayhave two SBR records associated with it: one for the MA Equi-site (when it is important or useful to keep ecological information about the existing Managed Area). and one

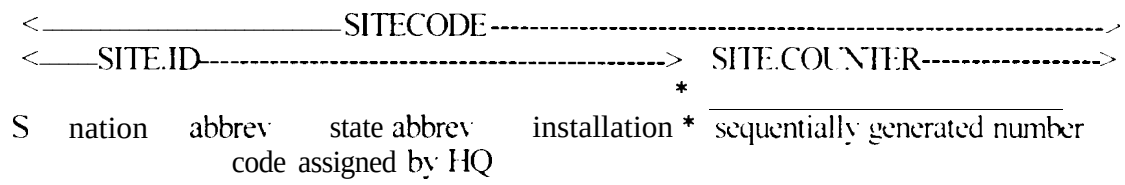
for a design Site (when it is important to represent the ultimate desired conservation boundaries for the Managed Area based on take-line plans for consolidation or expansion). Often when planning a Project. it is necessary to specify the Site on which the protection activity will take place. If the Project involves addition of a Tract to an existing Managed Area (eg. a government cooperative Project). then the Project (and Tract to be protected) should be linked to the design Site associated with the Managed Area (and not to the MA Equi-site). Linking the Project and Tract to the Conservation Site makes it possible to know the biodiversity significance of the Site to be protected (rather than of the MA Equi-site that is already protected). It would not make sense to link the Project and Tract to the MA Equi-site. since prior to transfer. the Tract does not even lie within the boundaries of the MA Equi-site.

EXCHANGE LAND SITES---Although SBR records are frequently created for identifying and characterizing ecologically significant areas of land (Conservation Sites). they may also be created for other land areas with little or no ecological significance that will be exchanged in order to protect a Conservation Site. These latter areas are known as Exchange Land Sites. They include any Tract(s) of land lacking significant Element Occurrences. that may be exchanged in a real estate Transaction for conservation land of comparable value. Exchange lands should not be confused with trade lands. Although both tradeland and exchange land lack significant ecological value. trade lands are not exchanged for real estate: they are sold for capital. Furthermore. although both trade land and exchange land may exist on Tracts that are geographically removed from Conservation Sites. exchange lands are necessarily (by the fact of the exchange) related to a particular conservation Site. Because of this relation. an Exchange Land Site may be composed of one or more Tracts of land scattered throughout the state. The Tracts are logically united by the fact that each Tract is exchanged for land in a particular Conservation Site. Exchange Land Sites should be name dafter the Conservation Site for which the exchange is planned.

File Responsibility: Responsibility for SBR records should be coordinated between the I Ieritage Program and The Nature Conservancy Field Office. The program or office in the state with the principal interest in a particular Site should assume lead responsibility for that Site's SBR record and should specify its responsibility in the LEADRESP field.

Record Key: SITECODE = (SITE.ID + SITE.COUNTER)

SITE IDentification (part of SITECODE)
SITE.ID is the 1st of two component fields that make up the record key, SITECODE, according to the following structure:



If you are creating a new record simply press enter at the SITE.ID prompt and again at the SITE.COUNTER prompt. The BCD System will automatically enter the appropriate ID and sequentially generated number. If vou wish to retrieve an existing record vou should clear the screen with the <F8> refresh key. and then select the appropriate Site code using the <F2> key search options.

SITE.COUNTER (part of SITECODE)
SITE.COUNTER is the 2nd of two component fields that make up the recordkey, SITECODE, according to the following structure:

```
<-------------------------------SITECODE------------------------------------------------------------>
<------------------SITE.ID------------------------------------><------------SITE.COUNTER--->
                                                              *
S  . nation abbrev . state abbrev . installation * sequentially generated number
                 code assigned by HQ
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If you are creating a new record, simply press enter at the SITE.COUNTER prompt and the BCD System will automatically enter the appropriate sequentially generated number. If you wish to retrieve an existing record, you should clear the screen with the <F8> refresh key, and then select the appropriate Site code using the <F2> key search options.

SITE NAME
Enter the official full name for the Site. Each Site should be assigned a unique name. Once assigned, the value in the SITENAME field should not change unless absolutely necessary. This will ensure consistency and better communication between Natural Heritage Data Centers, Nature Conservancy Field Offices, and other cooperators.

Unofficial names (including informal names and old names) should be entered in the SITEALIAS field.

A few standards in naming Sites should be followed:

1) Do not use Element names in the Site name. Sites should not be named after rare species. Naming a Site that has rare orchid Element Occurrences, "Orchid Meadow", might attract orchid collectors.

2) Use local place names when available. Although you may not find these names on topographic maps, you will often hear botanists, ecologists, hunters, and others refer to certain places by commonly used names. Examples: "DARLINGTON SWAMP" "COLDITZ COVE"

3) Use names of features on topographic maps when local names do not exist. Examples: "SANIBEL ISLAND" "OWL CANYON"

4) To avoid confusion, no two Sites within a state should have the same name. When a particular local place name or feature name is very common, add the centrum town or township name before or after the common name to distinguish between Sites. Example: "Long Pond" is a very common name on Massachusetts topographic maps. The following are the names assigned to distinguish between two Sites: "LONG POND SAG HARBOR" "WINCHESTER LONG POND"

5) Use the centrum town or township name with a generic natural community descriptor when no local place name or topographic feature name exists. Examples: "ANDOVER BLUESTEM PRAIRIE" "FRANKLIN RAISED FEN"

6) Use the centrum town or township name with a Site descriptor when no community is present. To distinguish between nearby Sites, use some other additional designation such as "Swamp" or "Woods". If absolutely necessary, use "North", "South", "East", or "West", or arabic numerals, but this convention should be avoided if at all possible. Examples: "BELLINGHAM POWERLINE SITE" "BELLINGHAM POWERLINE WOODS" "WESTERN PRAIRIE NORTH" "WESTERN PRAIRIE SOUTH" "DUGAN CREEK 1" "DUGAN CREEK 2"

7) Do not combine Site names with protection status, such as "Great Woods Easement". A Site is defined by an ecological boundary. Ownership Tracts associated with a Site are defined by legal

boundaries: Tract boundaries mav not necessarily coincide with Site boundaries. and different Tracts may have different protection statuses.

8) Do not name a Site after the Tract owner. The Jones Tract may encompass an entire Site. but it Smith buys it. the name “Jones Site” becomes meaningless.

9) Names for macrosites and megasites should be followed by the Site class descriptors. "Macrosite" or "Megasite". Examples: "VIRGINIA EASTERN SHORE MEGASITE" "GRAY RANCH MACROSITE" If two or more Sites representing different Site classes are nested then unique names. in addition to the Site class descriptors ("Macrosite" or "Megasite"). should be used: Examples: "BANKS LAKE" "BANKS LAKE WATERSHED MACROSITE" In this case. both the standard site and the macrosite center around Banks Lake. If the macrosite was simply named "Banks Lake Macrosite". there might be confusion in determining which Site was meant when casual reference was made using the words “Banks Lake”. The use of the word "Watershed" in the name of the Macrosite helps further distinguish the Macrosite from the standard site.

10) For clarity you may want to add the word “Site” to the following Site names: a) The name of any standard site ending with a descriptive term for a man-made feature (such as “Plantation”. “Ranch”. “Canal”. etc.). b) A one word Site name denoting a jurisdiction (such as Fenwick. Arcadia. Millville. etc.).

11) Abbreviate Mount and Saint when they appear in a Site name. Spell out all other words. Examples: "MT. MARCY" “ST. CLAIR WETLANDS"

12) Words such as Mc Laughlin should be spelled as one word. Examples: "MCLAUGHLIN PRAIRIE" "MACDOUGALL HOMESTEAD SITE”

13) Avoid adding parentheses. hyphens. or slashes in a Site name unless it is actually part of the name. Examples: "VERRAZANO-NARROWS BRIDGE SITE” "MO-KO PRAIRIE"

14) Managed Area Equi-sites (Sites whose area and boundaries coincide with an existing Managed Area) should be named after the Managed Area with the additional words "MA Equi-site” added. Example: “GEORGE WASHINGTON NATIONAL FOREST MA EQUI-SITE"

15) Exchange Land Sites should be named after the Conservation Sites to which they are related with the additional words "Exchange Land Site” appended to distinguish them from the Conservation Site. Example: "COACHELLA VALLEY MACROSITE" (a Conservation Site) "COACHELLA VALLEY EXCHANGE LAND SITE” (the related Exchange Land Site)

SITE CLASS
Enter the appropriate 2-letter code from the list below to indicate whether the Site in this record is a standard site. a macrosite. or a megasite. Site class should be determined strictly on the basis of acreage SS = standard site < 3,200 acres. MC = macrosite 3,200 - 64,000 acres. MG = megasite > 64,000 acres.

OLD CODE
Site records created before conversion to the new SITECODE (i.e.SITE.ID *SITE.COUNTER) coding scheme). will have an old code by which they were originally identified. The original code for the Site will be automatically entered into the OLDCODE field by the conversion program.

Old Sitecodes were determined according to the following 12-character structure:

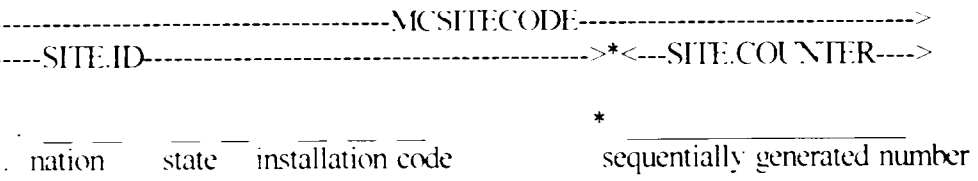
nation state Site type 1st 4 letters of SITENAME tiebreaker

where Site types included: SS = Standard Site < 3,200 acres. MC = Macrosite 3,200 - 64,000 acres. MG = Megasite > 64,000 acres

SITE ALIAS
Enter any unofficial name(s) by which this Site is known. You may include informal names, old names, names used by other offices or cooperating organizations, or the original survey site name (from the SURVEYSITE field in the related ELEMENT OCCURRENCE RECORD). Do not include names in the ALIAS field that are essentially the same as the formal Site name in the SITENAME field if all they lack is a Siteclass descriptor such as "Macrosite" or "Megasite". For example, do not include "ROAN MOUNTAIN" as an alias for the Site known as "ROAN MOUNTAIN MACROSITE".

MaCroSITE CODE
If you are creating an SBR record for a standard site contained within a macrosite, then enter the appropriate Site code for the macrosite. (Enter one code only. A standard site may be contained by only one macrosite; macrosites should not overlap.) A corresponding macrosite record should exist for the code that you enter. You may select the appropriate code from a pop-up list of options made available by pressing the <F2> key while the cursor is in the MCSITECODE field. If the code is not available (i.e. if the macrosite has not been assigned a code), you will have to create a separate SBR record for the macrosite. If you are creating an SBR record for a macrosite, the code for the macrosite should be entered in the SITECODE field only, and should not be repeated in the MCSITECODE field.

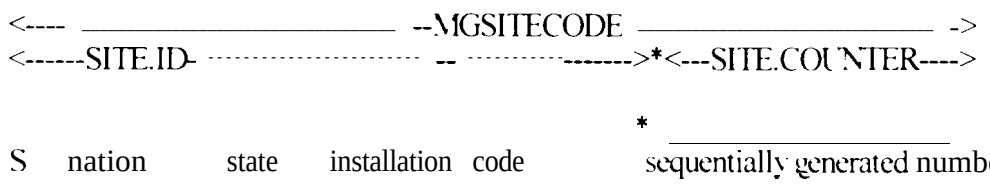
MCSITECODEs, like SITECODEs, are determined according to the following structure:



MaCroSITE NAME
MCSITENAME is a symbolic field representing the name of the macrosite designated in the MCSITECODE field. The macrosite named in this field contains the standard site named in the SITENAME field.

MGSITECODE
MeGaSITE CODE
If you are creating an SBR record for a standard site contained within a megasite, or for a macrosite contained within a megasite, then enter the appropriate Site code for the megasite. Since megasites may overlap, and a standard site or macrosite may be contained by more than one megasite, you should enter an appropriate code for each encompassing megasite. A corresponding megasite record should exist for each code that you enter. You may select the appropriate code from a pop-up list of options made available by pressing the <F2> key while the cursor is in the MGSITECODE field. If the code is not available (i.e. if the megasite has not been assigned a code), you will have to create a separate SBR record for the megasite. If you are creating an SBR record for a megasite, the code for the megasite should be entered in the SITECODE field only, and should not be repeated in the MGSITECODE field.

MGSITECODEs, like SITECODEs, are determined according to the following structure:



MeGaSITE NAME
MGSITENAME is a symbolic field representing the name of the megasite(s) designated in the MGSITECODE field. The megasite(s) named in this field contain the Site named in the SITENAME field as well as any macrosite named in the MCSITENAME field.

SITE RELATIONS
Enter any comments explaining the relationship between this Site and any nested, overlapping or adjacent Sites.

DEFINING Managed Area NAME
DEFINING.MANAME is a symbolic field representing the name of the Managed Area whose boundaries were used to define the Site (i.e. the MA Equi-site) in this record. The BCD System will automatically display the appropriate Managed Area name based on information entered in the related MANAGED AREA BASIC RECORD (MABR).

NATION
Enter an appropriate 2-letter abbreviation from the International Standards Organization (ISO) list for the nation where this Site is located. The Nature Conservancy's Headquarters Office maintains a copy of the ISO list in the central NATIONS file.

STATE
Enter a Z-letter standard abbreviation for the state or province where this Site is located. You may select the appropriate standard abbreviation from a popup list of options by pressing the <F2> key while the cursor is in the STATE field. If the Site crosses state boundaries, then separate SBR records should be created for each portion of the Site in a different state. The home state of the program or office responsible for Site selection and design should be designated in the SITERESP field it it is different from the locational state designated in the STATE field.

SITE RESPonsibility
Enter an appropriate 2-letter abbreviation for the state that is responsible for Site selection and management if it is different from the locational state.

COUNTY CODE
Enter a code for each county where the Site is located. It the Site spans more than one county, list the code for the centrum county first. A corresponding record must exist in the COUNTIES file for each county code that you enter. You may select the appropriate county code(s) from a popup list of options by pressing the <F2> key while the cursor is in the COUNTYCODE field.

County codes are generally determined according to the following 6-character structure:

State abbrev. 1st 4 letters of COUNTYNAME

For more detailed information on county codes. see the Help definition for the COUNTYCODE field in the COUNTIES file.

COUNTY NAME
COUNTYNAME is a symbolic field representing the names of' the counties designated in the COUNTYCODE field. The BCD System will automatically display the appropriate county names based on information available in related records in the COUNTIES tile.

LOCAL JURISdiction
Enter the full name of' the incorporated town. township. or borough in which the Site is located. If the Site is not in an incorporated town. township. or borough. then leave this field blank.

QUADrangle NAME
Enter the name(s) of' the U'S Geological Survey topographic quadrangle map(s) on which the Site is located. If the Site spans more than one map. list the map that includes the centrum of the Site first. You may select the appropriate name(s) from a popup list of options made available by pressing the <F2> key while the cursor is in the QUADNAME field. The code(s) for the map(s) should be entered in the associated QUADCODE field.

QUADrangle CODE
Enter the appropriate code for each U'SGS 7.5' (or 15') topographic quadrangle map on which the Site is located. If the Site spans more than one map. enter the code for the map with the centrum of the Site first. You may accept the default code(s) provided for your convenience based on the quad name(s) entered in the associated QUADNAME field.

Quad codes are determined according to the following 7-character structure:

degrees latitude	degrees longitude	code for minutes & seconds of latitude	code for minutes & seconds of longitude

For further details on Quad codes. see the I Help screen for the QUADCODE field in the QUADS file.

LATitude
Enter the latitude of' the centrum of' the Site.

LONGitude
Enter the longitude of' the centrum of' the Site.

South
Enter the latitude of' the southernmost boundary of' the Site

North
Enter the latitude of' the northernmost boundary of' the Site.

East
Enter the longitude of the easternmost boundary of' the Site.

West
Enter the longitude of' the westernmost boundary of the Site.

TOWNship and RANGE
For those Sites that lie within the United States rectangular land survey (an area including 30 states principally west and south of Ohio). enter the legal township and range description that best defines the location of the Site. If the Site spans more than one township. list the township range description that includes the Site's centrum first.

Township and range descriptions should be codified in the TOWNRANGE field according to the following S-character structure:

township N or S - range E or W

Example: 084N024W is the TOWNRANGE for a Site that is centered in township 8-1 north and range 24 west

Further details of the rectangular survey description of the Site location (i.e. the section. section divisions. and the meridian) should be specified in the SECTION. TRSNOTE. and MERIDIAN fields.

SECTION
For each township range description given in the preceding TOWNRANGE field. enter the legal section numbers that best describe the location of the Site in that township.

You may list a single section. selected sections. a range of sections. or all sections within a township by using the data entry conventions demonstrated in the following examples:

SECTION	Explanation	Convention
01	section 1	use a two digit number ranging from 0 1 to 36
03.08.27	sections 3. 8. 27	use a comma as a delimiter
02-05	sections 2. 3. 4. 5	use a dash for a range
06-08.31	sections 6. 7. 8. 31	use dashes and commas in combination
02-04.07-09	sections 2. 3. 4. 7. 8. 9	
01-36	sections 1 through 36	
ALL	sections 1 through 36	use "ALL" for all 36 sections.

If the Site spans more than one section. and you want to record the section in which the Site centrum is found. then list that section alone first.

Example:

TOWNRANGE	SECTION
084N024W 1	6
084N024W	OS-10.15.17.20-22.

If the Site can be located more precisely within a particular section.enter the specific section division (i.e. the 14 or 12 section. etc.) in the associated TRSNOTE field.

Searching for Sites:---It is often necessary to search the database for Sites located in a particular township. An index on the TOWNRANGE field has been provided to expedite this process. Searching by section is also possible (although without an index). and two symbolic fields have been specially defined in the SBR file dictionary for this purpose: TRS (township. range and section) and MTRS (meridian. township. range and section). These multiple-valued fields list sections individually based on data entered in the SECTION field. as in the example below:

Example (for a single record):

TOWNRANGE	SECTION	MERIDIAN --->	TRS	MTRS
100N100W	33-35	5P	100N100W33	5P100N100W33
099N100W	02-04,10	5P	100N100W34	5P100N100W34
			100N100W35	5P100N100W35
			099N100W02	5P099N100W02
			099N100W03	5P099N100W03
			099N100W04	5P099N100W04
			099N100W10	5P099N100W10

MERIDIAN
For each township and range description given in the TOWNRANGE field. enter a 2-character code from the list below for the legal meridian from which the east and west U S rectangular land survey range measurements were made.

1P = first principal	MD = Mount Diablo
2P = second principal	MI = Michigan
3P = third principal	NM = New Mexico
4P = fourth principal	OK = Oklahoma (aka Indian)
5P = fifth principal	PR = Principal
6P = sixth principal	SA = Seward
BH = Black Hills	SB = San Bernardino
BO = Boise	SH = St. Helena
CH = Choctaw	SL = salt Lake
CM = Cimarron	SR = Gila and Salt Rivers
CR = Copper River	SS = St. Stephens
CW = Chickasaw	TA = Tallahassee
EL = Ellicott's Line	UE = Ute
FB = Fairbanks	UI = Uintah
HU = Humboldt	UM = Umiat
HU = Huntsville	WM = Willamette
KR = Kateel River	WN = Washington
LA = Louisiana	WR = Wind River

Township. Range. and Section NOTE
If the Site can be precisely located within a particular section or set of sections. then describe the specific legal section division(s)(eg. the SE 1 4 of the NW 1 4) where the Site (or it's centrum) may be found.

DIRECTIONS
Enter precise directions to the Site using a readily locatable landmark (eg. a city. a major highway. etc.) as the starting point on a state or county road map. Use clear complete sentences that will be understandable to someone who is unfamiliar with the area. needs to get to the Site and has only your directions to follow. Cite distances as closely as possible to the 1 10 of a mile. use compass directions (N. S. E. and W). and be sure to specify the best access to the Site. such as where to park or which trail to use.

WATERSHED
Enter the appropriate 8-digit code from the U S Geological Survey Hydrologic Unit Map for each watershed where the Site is located. If the Site spans more than one watershed. list the watershed that includes the Site's centrum first. If you wish to track hydrologic subunits. you may use the expanded

11-digitcode(s) instead.

SITE DESCription
Enter a short general visual description (or word picture) of the principal physical and natural features on the Site. You may include in the description mention of noteworthy flora. fauna and communities and a brief account of the substrate (geologic formations. bedrock). soil types. hydrology (xeric. mesic. hydric. and hydrologic regimes). and general topography (mountains. valleys. relief. etc.). Comments about the significance of the Site and its features should be entered in the BIODIVCOM and OTHERVALUCOM fields.

KEY ENVIROnmental FACTORS
Enter comments describing the "driving factors" or key environmental variables which are known to exert a major influence on the biota at this Site. Key factors may include such things as seasonal flooding. wind. soil

MINimum ELEVation
Enter the minimum elevation of the area covered by the Site. The minimum elevation should represent the lowest altitude in feet. above or below sea level. at which the Site is found. Enter the maximum elevation covered by the Site in the next field MAXELEV. If the Site is located on flat terrain. then enter the uniform elevation in this field (MINELEV). and leave the MAXELEV field blank. A symbolic AVGELEV field will be available in the SBR file dictionary representing the Site's calculated average elevation.

MAXimum ELEVation
Enter the maximum elevation of the area covered by the Site. The maximum elevation should represent the highest altitude in feet. above or below sea level. at which the Site is found. If the Site is located on flat terrain. then leave this field blank: enter the uniform elevation in the MINELEV field instead. A symbolic AVGELEV field will be available in the SBR file dictionary representing the Site's calculated average elevation.

CLIMATE DESCription
Enter any general comments concerning climate and weather patterns. windpatterns. seasonal and annual variations. as well as temperature and precipitation patterns characteristic of the Site.

LAND USE HISTORY
Enter comments concerning past land uses on this Site (such as mining logging. shifting cultivation. etc.). Do not describe current land uses in this field. You may enter comments concerning current land uses in the LANDUSECOM field.

CULTURAL FEATURES
Enter comments concerning any historic. cultural. or archaeologic features found on the Site (eg. pictographs. petroglyphs. burial mounds. prehistoric artifacts. etc.)

SITE MAP
Specify whether a Site design map including all or some of the required components has been completed by entering one of the following letters: Y =Yes. a Site map including all required components has been completed P = a partial map has been completed N = So. there is no Site map or no known Site map A complete Site design map should include all of the following required components: 1) all Element Occurrences: 2) primary and secondary ecological Site boundaries: 3) all Tract ownership boundaries: 4) all existing Managed Area boundaries.

MAP DATE
Enter the date (yy-mm-dd) on which a Site map was completed.

DESIGNER
Enter the name of the person (last name first) who designed the Site and determined its boundaries.

BOUNDary JUSTification
Explain the biological rationale used to determine the location of the Site's primary and secondary ecological boundaries. Your explanation should clearly justify why the Site boundaries were drawn where they were rather than simply describe the boundaries or any coincidental property lines. Include reference to the source of information (eg. field work, maps, etc.) on which boundary decisions were based.

PRImary and SECondary ACRES
Enter the estimated total acreage of the Site (i.e. enter the total acres of land that fall within the primary and secondary ecological boundaries of the Site).

PRISEC_ACRES in the SBR record should be equal to the sum of PRISEC_ACRES from all the TRACTS records for Tracts associated with this Site.

Do not include trade land acreage in PRISEC_ACRES. A Site is defined by ecological boundaries and includes only ecologically significant areas: tradelands, by definition, have no ecological significance and are never found within a Site's boundaries. Tradelands may still be associated with a Site but only when the legal Tracts of land associated with the Site extend beyond the boundaries of the Site. That portion of a Tract which falls outside of the Site's boundaries may be considered trade land. The tradeland acreage for that Tract should be entered in the TL_ACRES field in the TRACT_DETAIL record. The total trade land acreage associated with the Site (equal to the sum of TL_ACRES from all related TRACT_DETAIL records) should be entered in the TL_ACRES field in the SITE BASIC RECORD.

Example: Assume that the primary boundaries of a Site encompass 6 acres and that the secondary boundaries encompass an additional 4 acres for a total Site acreage of 10 acres. Assume further that the Site is located on two Tracts of land and that neither owner will subdivide. The Tracts together are larger than the Site and have a total combined acreage of 38 acres. Since only 10 of these acres are ecologically significant, 28 acres of trade land are associated with the Site. Given the situation above, one SBR record, two TRACTS records, and two TRACT_DETAIL records might be completed as follows:

Site	Tract A	Tract B
	TRACT_ACRES = 18	TRACT_ACRES = 20
PRISEC_ACRES = 10	PRISEC_ACRES = 6	PRISEC_ACRES = 4
PRIMARY_ACRES = 6	PRIMARY_ACRES = 5	PRIMARY_ACRES = 1
TL_ACRES = 28	TL_ACRES = 12	TL_ACRES = 16

PRIMary ACRES
Enter the estimated total acreage that occurs within the primary ecological boundaries of the Site. The sum of PRIMARY_ACRES from all TRACTS records associated with this Site should be equal to the value you enter in PRIMARY_ACRES here.

Trade Land ACRES
Enter the estimated total trade land acreage associated with the Site. Trade lands may be associated with a Site when the legal Tracts of land associated with the Site extend beyond the boundaries of the Site.

That portion of each Tract which falls outside of the Site's boundaries may be considered trade land. The trade land acreage for a particular Tract should be entered in the TL_ACRES field in the corresponding TRACTS record. The total trade land acreage associated with the Site (equal to the sum of TL_ACRES from all related TRACTS records) should be entered in the TL_ACRES field here. You should enter an exact figure if known; otherwise approximate as best you can. If you know that there are no trade land acres. then enter a zero (0). If you do not know whether there are any trade land acres. then leave this field blank. For further explanation and examples see the Help screen for the PRISEC_ACRES field in the SITE BASIC RECORD. Comments on the Site's trade land acreage should be entered in the SITECOM field.

SITE COMments
Enter general comments regarding the Site. If the Site in this record is a priority megasite or wetland site. specify the source (a letter. memo or other documentation) and date of there commendation for prioritizing the Site.

OLD RATING ** This field will be phased out after the 1992 edition. Enter a general ecological rating for the Site using a single-digit code from the list below for the criteria which best characterizes the Site. (Sites should also be rated according to a new system which separates the attributes of a Site on scales of biodiversity significance. other values, and urgency for protection and management. See the Help screens for the BIODIVSIG, OTHERVALUES, PROTURGENCY, and MGMTURGENCY fields.)
1 = Rare ecosystem or rare Element: a G1 or G2 Element is present (i.e. the last of the least) 2 = Outstanding natural feature or undisturbed land: a G3, S1, or S2 Element is present. or an A or B ranked Element Occurrence is present (i.e. the best of the rest) 5 = any Site not meeting the criteria for an ecological rating of 1 or 2

This ecological rating system for Sites is derived from the old NATO (National Office) ecological rating system for classifying Projects. Ratings of 3 and 4 have been omitted in the OLDRATING criteria listed above since they lose their meaning in the context of Sites. For comparison the original rating system for Projects is listed below:

1 = Rare ecosystem. Of national importance which contains unique or unusual ecological features: is an ecologically viable and defensible representation of a natural ecosystem type; with uniqueness or considerable rarity. 2 = Outstanding natural feature. Outstanding unique natural feature or phenomenon (eg. important geological outcrop. champion tree. natural bridge. heron rookery, bat cave) of statewide or multi-state significance. Undisturbed land. Viable ecosystem preserve. but lacking outstanding features or rarities. but of statewide or regional (multi-state) importance (eg. old growth mixed mesophytic forest. cypress swamps, unplowed prairies. saltmarsh. relatively free from human impact.) 3 = Scientific or education area. Established research site. baseline site or active educational use site or an area specifically acquired for immediate transfer to an educational or research institution. 4 = Buffer land. Noncritical to maintaining ecological viability of original area but is desirable for long range protection of a preserve. 5 = Human ecological area. Area that is insignificant as representative of biological communities but have a value in improving man's relations and appreciation of the natural world. Urban open space. nature park. aesthetic areas, etc.

RATING COMments ** This field will be phased out after the 1992 edition. Enter comments justifying the ecological Site rating assigned in the OLDRATING field (eg. "protects Site of a G1 fish").

BIODIVersity SIGnificance
Enter the appropriate 2-character code from the list below for the rating which best describes the significance of the Site in terms of its biological diversity. B1 - Outstanding significance. such as the

only known occurrence of any Element. the best or an excellent (A-ranked) occurrence of a G1 Element. or a concentration (4+) of high-ranked (A- or B-ranked) occurrences of G1 or G2 Elements. Site should be viable and defensible for targeted Elements and ecological processes contained.

Macro Megasite: Should contain multiple B1 Standard Sites which require additional bufferage in a Bioreserve context. Or should be THE outstanding example of an integrated landscape complex for a major ecoregion or biome and be defensible in its entirety. B2 - Very high significance. such as one of the most outstanding occurrences of any community Element (regardless of its Element rank). Also includes areas containing any other (B-. C- or D-ranked) occurrence of a G1 Element. a good (A- or B-ranked) occurrence of a G2 Element. an excellent (A-ranked) occurrence of a G3 Element. or a concentration (4+) of B-ranked G3 or C-ranked G2Elements.

Macro Megasite: Should contain multiple B2 Standard Sites which require additional bufferage in a Bioreserve context. Or should be documented as a migratory stopover critical to the existence of one or more species. or should be a second best example of an integrated landscape complex in an ecoregion. B3 - High significance. such as any other (C- or D-rank!) occurrence of a G2 Element. a B-ranked occurrence of a G3 Element. an A-ranked occurrence of any community. or a concentration (4+) of A- or B-ranked occurrences of (G4 or G5) S1 Elements.

Macro Megasite: Should contain multiple B3 Standard Sites which require additional bufferage in a Bioreserve context. Or should be at least an adequate example of a regional landscape type in an under-represented ecoregion. B-1 - Moderate significance. such as a C-ranked occurrence of a G3 Element. a B-ranked occurrence of any community. an A- or B-ranked or only state (but at least C-ranked) occurrence of a (G-1 or G5) S 1 Element. an A-ranked occurrence ot an S2 Element. or a concentration (4+) of good (B-ranked) S2 or excellent (A-ranked) S3 Elements.

Macro Megasite: Should contain multiple B4 Standard Sites. Or could be a less adequate example of a regional landscape type. perhaps of a fragmented nature making successful management more difficult. B5 - Of general biodiversity interest or open space. Notes: For purposes of assigning Biodiversity Significance ratings to Sites: Elements with range ranks spanning two levels (eg. G2G3) should be treated as if they had the higher (eg. G2) of the two ranks: Elements with range ranks spanning three levels (eg. G3G5) should be treated at the middle rank (eg. G4): Elements with ranks such as G3? should be treated as if there were no question mark: Elements with a GU rank should be treated as if it were G4: Elements with "Q"s attached to their global ranks (i.e. questionable taxa) should be treated at the next lower G rank (eg. treat a G3Q as if it were a G4): Elements with "T's attached to their global ranks (i.e. subspecific taxa should be treated at the next lower G rank (eg. treat a G4T1 as if it were a G2 (see RSQ Table)): Element Occurrences with range ranks (eg. AB) should be treated as if they were ranked at the lower of the two levels (eg. B): Element Occurrences that are not yet ranked should be treated as if they were C-ranked.

BIOlogical DIVersity COMments
Enter comments justifying the Site biological diversity significance rating that was assigned in the BIODIVSIG field.

OTHER VALUES
Enter the appropriate 2-byte code (from the list below) for the rating which best describes the significance of the Site in terms of its aesthetic. recreational. open space. and other ecological values. including its role in maintaining ecosystem health (eg. by providing game and wildlife habitat. aquifer recharge functions. erosion control. etc.). V1 - Outstanding values. Such values are generally recognized and a high amount of interest exists in the site's protection. V2 - High values. V3 - Moderate values. V4 - So important other values discernible or known. V5 - Other values demonstrably absent or actual counter

values exist and/or the Site's other values are incompatible with land conservation.

OTHER VALUes COMments
Enter comments justifying the Site's other-values rating that was assigned in the OTHERVALUES field.

PROTection URGENCY
Enter the appropriate 2-byte code (from the list below) for the rating which best describes the urgency to protect the Site. The urgency for protection action (not to be confused with the urgency for management action) will generally increase with impending threats to the Site until legal. political. or other administrative measures are taken.

P1 - Immediately threatened by severely destructive forces (within 1 year of rank date): protect now or never! P2 - Threat expected within 5 years. P3 - Definable threat. but not in next 5 years. P4 - So threat known for forseeable future. P5 - Land protection complete (CS = IS for all Tracts within the secondary ecological boundary) or adequate reasons esist not to protect the Site: do not act on this Site! A protection action should not be confused with a management action. A protection action typically involves raising the current status (CS) of one or more Tracts at a Site. It may also include activities such as educational or public relations campaigns or collaborative planning efforts with public or private entities to minimize adverse impacts to Element Occurrences at a Site. It does not include management actions (i.e. any action requiring stewardship intervention). Urgency for management action should be rated separately in the MGMTURGENCY field. Threats that may require a protection action include: 1) anthropogenic forces that threaten the existence of one or more Element Occurrences at the Site (eg. (a) development that would destroy. degrade. or seriously compromise the long-term viability of an Element Occurrence: and (b) timber. range. recreational. or hydrologic management that is incompatible with an Element Occurrence's existence): 2) the inability to undertake a management action in the absence of a protection action (eg. obtaining a management agreement): 3) in extraordinary circumstances. a prospective change in ownership or management that will make future protection actions much more difficult.

PROTect ion URGency COMments
Enter comments justifying the Site protection urgency rating that was assigned in the PROTURGENCY field.

ManaGeMenT URGENCY
Enter the appropriate 2-byte code (from the list below) for the rating which best describes the urgency to manage one or more Elements at the Site. The urgency for management action (not to be confused with the urgency for legal protection action) requires stewardship intervention in order to maintain Element Occurrences at the Site. M1 - a) New management action required immediately or Element Occurrences could be lost or irretrievably degraded within 1 year. b) Ongoing annual management action must continue or Element Occurrences could be lost or irretrievably degraded within 1 year. M2 - a) New management action will be needed within 5 years to prevent loss of Element Occurrences. b) Ongoing recurring management action must continue within 5 years to prevent loss of Element Occurrences. M3 - a) New management action will be needed within 5 years to maintain current quality (i.e. EORANK) of Element Occurrences. b) Ongoing. recurrent management action must continue within 5 years to maintain current quality of Element Occurrences. M4 - Although not currently threatened. management may be needed in the future to maintain current quality of Element Occurrences. M5 - So serious management needs known or anticipated at Site. A management action should not be confused with a legal protection action. A management action may include biological management (eg. prescribed burning. removal of exotics. mowing. etc.) or people and Site management (eg. building barriers to prevent ORV use. rerouting trails. patrolling for collectors. hunters or trespassers. etc.). Management action does not include legal. political. or administrative measures taken to protect a Site. Urgency for

protection action should be rated separately in the PROTURGENCY field.

MANAGEMENT URGENCY COMMENTS
Enter comments justifying the Site management urgency rating that was assigned in the MGMTURGENCY field. Do not describe general Site management needs in this field. Only those needs that are urgent or specific to maintaining the Element Occurrences on the Site should be addressed. Routine management needs that apply to the Site as a whole should be described in the MGMTNEEDS field instead.

CONSERVATION INTENTIONS
Summarize the general conservation intentions for the Site. Describe the protection strategy and indicate the intended statuses (IS) of the component Tracts. General comments on the current statuses (CS) of component Tracts should be entered in the SBR records PROTCOM field.

NUMBER OF TRACTS
Enter the estimated number of legal Tracts that make up the Site. If the number of Tracts is not known or can not be estimated then leave this field blank. A TRACTS record should be completed for each Tract in the Site.

ESTIMATED PROTECTION COST
Enter the estimated cost to The Nature Conservancy to protect the Site. Include preserve design, acquisition and stewardship costs.

DESIGNATION CODE
Enter an appropriate code for the special government or Nature Conservancy designation given to the Site. A corresponding record must exist in the DESIGNATIONS file for the designation code that you enter. You may select the appropriate designation code from a pop-up list of options made available by pressing the <F2> key while the cursor is in the DESIG.CODE field. Examples: DESIG.CODE

DESIGNATION	
NNL	National Natural Landmark
RNA	Research Natural Area
PWL	Priority Wetlands Site
PMGS	Priority Megasite
MAB-BR	Man and the Biosphere - Biosphere Reserve

DESIGNATION
DESIGNATION is a symbolic field representing the full name of the special government or Nature Conservancy designation referenced in the DESIG.CODE field. The BCD System will automatically display the appropriate designation based on information available in the related DESIGNATIONS record.

PROTECTION COMMENTS
Summarize the general level of protection currently afforded the Site indicating the current protection statuses (CS) of the component Tracts. Comments on the general conservation intentions for the Site and the intended statuses (IS) of component Tracts should be entered in the CONSINTENT field.

LAND USE COMMENTS
Describe current and past land use, improvements and structures. Describe how the land has been used and is currently used and discuss the stewardship implications of this use. Also describe stewardship

implications including hydrological alterations. etc. Uses to consider: recreation. dumping. agriculture. mining. ROWs. etc. Discuss the possibility of hazardous or toxic waste disposal on Site including reasons as to why it may or may not be a problem.

NATural HAZard COMments
Describe potential natural hazards (eg. cliffs. caves. waterfalls. etc.) on the Site and indicate any precautions stewardship should take.

EXOTICs COMments
Describe potentially damaging exotic (i.e. alien) flora and fauna (eg.kudzu. honeysuckle. purple loosestrife. periwinkle. English ivy. feral goats. pigs. etc.) on the Site. Indicate their location and abundance. as well as their effect on the viability of endangered Elements. Indicate also how stewardship will manage or control the exotic species and whether local ordinances require such control.

OFF-SITE
Describe off-site land uses (eg. farming. logging. grazing. dumping. watershed diversion. etc.) and how those uses might affect the Site. Elements on the Site. and management of the Site.

INFOrmation SEEDS
Summarize the information that is still needed in order to effectively manage the Site and Elements on it. Include such items as the need for Element Stewardship Abstracts. research on management techniques. a more detailed land use history. or baseline monitoring.

MANaGeMenT SEEDS
Summarize the expected management needs for the Site and the Elements on it. Include routine items such as the need for fencing. restricting use. grazing. control of exotics. burning. etc. Any urgent items (where immediate specific management actions are essential for the preservation of specific Element Occurrences on the Site) should be listed separately in the MGMTURGCOM field. Comments concerning a Managed Area currently overlying the Site (or a Managed Area that will be established to protect the Site) should be entered in the SBR record's MACOM field.

Managed Area COMments
Explain the Site/Managed Area relationship if a Managed Area has been or will be established to protect the Site (eg. "Site is wholly contained in the Brigantine NWR"). Summarize the specific management needs for the Site (such as fencing. grazing. burning. etc.) in the SBR record's MGMTNEEDS field.

ELCODE
The ELCODE field (i.e. technically the EOR.KEYS field) lists the Element code for each Element Occurrence found on the Site. The BCD System will automatically complete this field. To ensure a comprehensive listing however. the appropriate Site code must be entered in the SITECODE field in all related ELEMENT OCCURRENCE RECORDs.

State element NAME
SNAME is a symbolic field representing the state scientific name for the Element designated in the associated ELCODE field. The BCD System will automatically display the appropriate scientific name based on information from the related ELEMENT OCCURRENCE RECORD.

State COMmon NAME
SCOMNAME is a symbolic field representing the state common name for the Element designated in the associated ELCODE field. The BCD System will automatically display the appropriate common name

based on information from the related ELEMENT OCCURRENCE RECORD.

Global RANK
GRANK is a symbolic field representing the global endangerment rank of the Element designated in the associated ELCODE field. The BCD System will automatically display the appropriate rank based on information from the related ELEMENT OCCURRENCE RECORD.

State RANK
SRANK is a symbolic field representing the state endangerment rank of the Element designated in the associated ELCODE field. The BCD System will automatically display the appropriate rank based on information from the related ELEMENT OCCURRENCE RECORD.

ADDiTionaL TOPICS
Enter specific comments on any significant additional nonstandard topics concerning this particular Site which you wish to track that have not been formally addressed by one of the standard fields in this record. (Additional topics should be of interest to a global audience and will be included as a normal part of an SBR file data exchange.) You should separate comments on different topics with a caret sign (^) and identify the topics covered in the TOPIC.KEYWORDS field. (The caret sign delimiter will be useful in separating paragraphs for reporting purposes. A specially formatted symbolic field ADDTL.TOPICS.FMT has been provided in the SBR file dictionary for this purpose). The ADDTL.TOPICS field should be used only for comments on topics which you wish to track (i.e.. store and retrieve by topic) and for which no appropriate standard fields are available. Comments of a general nature. where it is not important to flag the topic. may be entered in the SITECOM field instead. Comments in the ADDTL.TOPICS field should be considered a formal. but nonstandard part of the SBR record. Unlike standard data an additional topic will generally only apply to a single record or small subset of records.

Optional Data vs. Additional Nonstandard Topics--Do not confuse optional data with additional nonstandard topics. Optional data should not be entered in the ADDTL.TOPICS field but in the accessory SBR.OPT file instead. Optional data fields are provided to meet local user-defined standards within a particular office or small group of offices. As standards. they apply to every record in the database. but because they are defined for local needs. the data will be transferred between offices on an ad hoc basis only. You may access the optional file. SBR.OPT. by pressing the <Ctrl-F6> relations key from the current entry window. Additional nonstandard topics. unlike optional data. are not standard and apply to a single record or small subset of records only. Furthermore. unlike optional data additional nonstandard topics will generally be of interest to a global audience and are therefore included in the basic SBRfile (and in normal SBR file data exchange).

TOPIC KEYWORDS
Enter a list of the topics covered in the preceding ADDTL.TOPICS field. Topics should be listed in a corresponding order. You should try to maintain a standardized keyword list. This will help ensure future efficiency in retrieving all records dealing with a particular topic.

SOURCE CODE
This field is symbolic.

IMAGERY COMments
Enter any comments explaining the kinds of imagery that arc available for this Site.

LEAD RESPonsibility
Enter the system ID code for the office or installation that is responsible for keeping the data in this

particular record up-to-date. Only one office should assume principal responsibility for this particular record. If other offices use the data in this record. they should inform the lead office of any modifications that may be necessary. The lead office should be respected as keeper of the master record in order to maintain consistency and accuracy of data between offices.

EDITION
Enter the date (yy-mm-dd) of the current edition of this SBR record (i.e..the date that this record was first completed. or since then. comprehensively revised). Specify the name of the current edition author (i.e.. the person principally responsible for preparing this edition) in the EDAUTHOR field.

EDition AUTHOR
Enter the name of the author of the current edition of this SBR record(i.e.. the name of the person principally responsible for preparing this edition).

OFFICE
When a record is updated the BCD System will automatically create an audit trail of the fields that were changed (CHANGE.FIELDS), when they were changed (CHANGE.DATE), and who changed them (OFFICE and INITIALS). Changes will be listed in reverse chronological order (i.e. the most recent changes will be listed first). The OFFICE field will list the nation/state/installation ID codes of all offices that have made changes to the record.

INITIALS
When a record is updated the BCD System will automatically create an audit trail of the fields that were changed (CHANGE.FIELDS), when they were changed (CHANGE.DATE), and who changed them (OFFICE and INITIALS). Changes will be listed in reverse chronological order (i.e. the most recent changes will be listed first). The INITIALS field will list the initials of all persons who have made changes to the record.

CHANGE DATE
When a record is updated, the BCD System will automatically create an audit trail of the fields that were changed (CHANGE.FIELDS), when they were changed (CHANGE.DATE), and who changed them (OFFICE and INITIALS). Changes will be listed in reverse chronological order (i.e. the most recent changes will be listed first). The CHANGE.DATE field will list all the dates on which changes were made to the record.

CHANGEd FIELDS
When a record is updated. the BCD System will automatically create an audit trail of the fields that were changed (CHANGE.FIELDS), when they were changed (CHANGE.DATE), and who changed them (OFFICE and INITIALS). Changes will be listed in reverse chronological order (i.e. the most recent changes will be listed first).The CHANGE.FIELDS field will list the field numbers of all fields in the record that have been changed.

MANUAL FILE NOTE
Fnter any comments concerning additional information related to this record that may be found in manual files. If necessary, indicate which office has the manual file and where it is located.

Appendix C 1. Willamette Basin BPA Mitigation Sites - Acquisition 04 FEB 1993

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** ALDRICH POINT							
640	CLATSOP COLUMBIA	200.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: ELK, BLACKTAIL DEER, GEESE WATERFOWL SENSITIVE SPECIES: BALD EAGLE NEST	WETLANDS MIXED CONIFEROUS FOREST DECIDUOUS FOREST	SITE-ACQUISITION	COLUMBIA RIVER RIPARIAN BOTTOMLAND, MIXED DECIDUOUS AND CONIFER FOREST WITH WETLANDS.
• AMERICAN BOTTOM							
532	POLK	1500.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL	RIPARIAN RIVERINE	SITE-ACQUISITION	WILLAMETTE RIVER RIPARIAN-HERON ROOKERY.
• ** AMERICAN ISLAND HERONRY							
473	BENTON	135.00	1.0: TES-0; BIODIVERSITY-0; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON	RIPARIAN RIVERINE SLOUGH LOWLAND FORESTED WETLANDS	SITE-ACQUISITION	LARGE FLAT ALLUVIAL ISLAND, FORESTED BY TALL BLACK COTTONWOODS AND WILLOWS WITH AN UNDERSTORY OF REED CANARY-GRASS AND P
• ** ANKENY REFUGE ADDITIONS							
876	MARION	1200.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: CANADA GOOSE, BLACK-TAIL DEER SENSITIVE SPECIES: DUSKY CANADA GOOSE, POND TURTLE, PAINTED TURTLE SONGBIRDS WATERFOWL: MIGRATORY, WINTERING BIG GAME: BLACK-TAIL DEER	OREGON ASH WOODLAND RIPARIAN WAPATO WETLAND	SITE-ACQUISITION. Includes additions to the refuge, largely farmland with some riparian.	Wetland, farmland bottomland by the Willamette River.
• ** ANNUNDE AND KINNUNEN ISLANDS							
651	COLUMBIA	137.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: GEESE WATERFOWL SENSITIVE SPECIES: COLUMBIA WHITETAIL DEER, BALD EAGLE FORAGING SHOREBIRDS	WETLANDS COTTONWOOD LOWLANDS MUDFLATS	SITE-ACQUISITION. TNC ACQUIRED ANNUNDE ISLAND 2/93 FOR USFWS.	UNDIKED COLUMBIA RIVER ISLAND, DOMINATED BY COTTONWOOD RIPARIAN FOREST WITH EMERGENT MARSH.
*** BLACK DOG BAR							
492	LINN	60.00	1.0: TES-0; BIODIVERSITY-0; FISH-0.0; PRIORITYHAB-1; ONSITE-0		HERON ROOKERY	SITE-ACQUISITION.	HERON ROOKERY ON WILLAMETTE RIVER ISLAND AND SHORE.
• ** BOULDER CREEK WINTERING AREA							
699	LANE	127.00	2.5: TES-0; BIODIVERSITY-0; FISH-0.5; PRIORITYHAB-1; ONSITE-1	TARGET SPECIES: QUAIL, GROUSE BIG GAME WINTER RANGE: ELK	RIPARIAN	SITE-ACQUISITION.	LOW ELEVATION MIXED CONIFEROUS-DECIDOUS RIPARIAN FOREST, INCLUDING 800' OF SOUTH SANTIAM RIVER FRONTAGE.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
. ** BUCK LAKE ON RYNN RIDGE							
482	LANE	160.00	5.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-0; ONSITE-1	RARE CRAYFISH	LAKE	SITE-ACQUISITION. PRIVATE LAND ADJACENT TO SOME BLM LANDS.	MONTANE LAKE, WITH RARE CRAYFISH.
*** BURLINGTON BOTTOMS							
276	MULTNOMAH	350.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL TUNDRA SWAN WINTERING	RIPARIAN WETLAND POND	SITE-ACQUISITION. RECENTLY ACQUIRED, SOME RESTORATION STILL REQUIRED.	The property lies along the banks of the Multnomah Channel just west of Sauvie Island. It lies below 50 feet elevation a
. ** CALAPOOIA RIVER OLD GROWTH							
494	LINN	600.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0		OLD GROWTH FOREST	SITE-ACQUISITION. MAY BE TOO SMALL TO ADEQUATELY PROTECT THE OLD GROWTH WILDLIFE PRESENT.	OLD GROWTH CONIFER FOREST ALONG THE WILLAMETTE VALLEY MARGIN.
*** CANDIANI ISLAND							
519	MARION	40.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON	RIPARIAN RIVERINE SLOUGH LOWLAND WETLAND	SITE-ACQUISITION.	HERON ROOKERY (50 PAIRS) ON ISLAND WITH AREAS OF BLACK COTTONWOOD AND WILLOW, REED CANARY GRASS, AND SAGITTARIA LATIFOLI
. ** CLACKAMAS RIVER RIPARIAN							
475	CLACKAMAS	320.00	3.5: TES-1; BIODIVERSITY-1; FISH-0.5; PRIORITYHAB-1; ONSITE-0		RIPARIAN	SITE-ACQUISITION	WILLAMETTE VALLEY MARGIN RIPARIAN BOTTOMLAND, WITH SOME CONIFER AND MAPLE WOODLAND, AND SOME COTTONWOOD-ALDER RIPARIAN A
. ** COBURG HILLS BALD EAGLE ROOST							
692	LANE	1000.00	2.0: TES-1; BIODIVERSITY-0; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: QUAIL, GROUSE SENSITIVE SPECIES: BALD EAGLE ROOST	OLD GROWTH FOREST	SITE-ACQUISITION.	OLD GROWTH FOREST REMNANT NEAR LAKES ON WILLAMETTE VALLEY MARGIN.
. ** CONFLUENCE OF MCKENZIE AND WILLAMETTE RIVERS							
481	LANE	1000.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON SONGBIRDS	RIPARIAN HERON ROOKERY	SITE-ACQUISITION.	Riparian bottomland with islands, with black cottonwood, alder, willow and ash, and a heron rookery.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** COX BUTTE AREA							
698	LANE	480.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL CANADA GEESE TARGET SPECIES: QUAIL SENSITIVE SPECIES: DUSKY CANADA GEESE	OAK WOODLAND WETLANDS RIPARIAN	SITE-ACQUISITION.	Lowland ash-oak woodland along the Long Tom River, with some wetlands and endangered species habitat.
• [illegible] CRIMS [illegible]							
644	COLUMBIA	700.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: BLACKTAIL DEER, MALLARDS WATERFOWL SENSITIVE SPECIES: BALD EAGLE NEST SHOREBIRDS OSPREY NESTING AND FORAGING	WETLANDS COTTONWOOD LOWLANDS RIPARIAN TIDAL MUDFLATS	SITE-ACQUISITION.	Columbia river island with ash-cottonwood riparian forest and emergent marsh.
• ** DAWS BEND HERONRY							
472	BENTON	60.00	1.0: TES-0; BIODIVERSITY-0; FISH-0.0; PRIORITYHAB-1; ONSITE-0		HERON ROOKERY	SITE-ACQUISITION	HERON ROOKERY ALONG THE WILLAMETTE RIVER.
• ** DEER ISLAND							
653	COLUMBIA	4400.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL SENSITIVE SPECIES: DUSKY CANADA GEESE, TURTLES (PAINTED?) TARGET SPECIES: GEESE, MINK, BLACKTAIL DEER SHOREBIRDS HERONRY	WETLAND RIPARIAN COTTONWOOD LOWLAND TIDAL MUDFLATS	SITE-ACQUISITION AND EVENTUALLY ENHANCEMENT. Grazed with lots of reed canary grass. Difficult t	LARGE ISLAND IN COLUMBIA RIVER ABOUT 20 MILES FROM PORTLAND. ISLAND LARGELY PASTURE, PROVIDING HABITAT FOR GEESE AND COL
• ** DORENA HERONRY							
487	LANE	60.00	2.0: TES-0; BIODIVERSITY-0; FISH-0.0; PRIORITYHAB-1; ONSITE-1		RIPARIAN HERON ROOKERY	SITE-ACQUISITION.	Heron rookery and riparian remnant on Row River just below the Dam.
• ** DORFLER'S POND/BEAVER LAKE							
490	LINN	120.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WESTERN POND TURTLE	WETLAND PONDS	SITE-ACQUISITION.	Pond and Willamette Valley bottomland.
• ** EAGLE ROCK							
479	LANE	100.00	5.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-1	BALD EAGLE	OLD GROWTH FOREST	SITE-ACQUISITION. MUCH OF THE SITE IS IN PUBLIC (ARMY CORPS) OWNERSHIP.	OLD GROWTH DOUGLAS FIR-WESTERN HEMLOCK FORESTS ON STEEP SLOPES COMPOSED OF LARGE INTRUSIONS OF NIMROD GRANITE.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** EOLA CREST							
535	YAMHILL	320.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	EARTHWORM (PLUTELLUS BLACKII)	BOTTOMLAND WOODLAND	SITE-ACQUISITION.	Willamette Valley bottomland woodland.
• ** EVERS LAKE							
538	YAMHILL	60.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	BEAVER BIRDS	OXBOW LAKE WETLAND	SITE-ACQUISITION.	Old oxbow lake off of the Yamhill River, with wetlands, riparian woodlands and adjacent farmlands.
• ** FAIRHAVEN HEIGHTS							
469	BENTON	40.00	2.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-0; ONSITE-0	SHARP-TAILED SNAKE		SITE-ACQUISITION. AREA MAY ALREADY BE TOO DEVELOPED TO BE VALUABLE FOR WILDLIFE.	Valley margin rocky hillside with open woodland.
*** FERGUSON CREEK SLOUGH							
483	LANE	320.00	2.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	POTENTIAL FOR POND TURTLE AND OREGON CHUB	SLOUGH RIPARIAN	SITE-ACQUISITION.	Willamette Valley slough at the margin of valley, with ash and willow riparian, and adjacent oak and maple woodlands.
• ** FINLEY NWR ADDITIONS							
627	BENTON	1300.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: CANADA GOOSE, BLACK-TAIL DEER SENSITIVE SPECIES: DUSKY CANADA GOOSE, WESTERN POND TURTLE, PAINTED TURTLE, PURPLE MARTINS, BALD EAGLE SONGBIRDS WATERFOWL: MIGRATORY, WINTERING BIG GAME: BLACK-TAIL DEER	OREGON ASH WOODLAND RIPARIAN WAPATO WETLAND	SITE-ACQUISITION. Important wildlife refuge and natural area additions for more goose habitat a	Additions of up to 1300 acres along the southern and eastern boundary of Finley Refuge.
• ** FOREST PARK							
524	MULTNOMAH	40.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0		CONIFER-HARDWOOD FOREST	SITE-ACQUISITION AND ENHANCEMENT	SECOND GROWTH DOUGLAS FIR WOODLAND WITH SEVERAL SUCCESSIONAL STAGES REPRESENTED, INCLUDING DOUGLAS FIR/SWORD FERN, WESTE

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** GOAT ISLAND							
654	COLUMBIA	300.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: BLACKTAIL DEER, GEESE, MINK (FURBEARERS?) WATERFOWL SENSITIVE SPECIES: TURTLES (PAINTED?) SHOREBIRDS	WETLANDS COTTONWOOD LOWLAND TIDAL LOWLANDS AND MUDFLATS RIPARIAN	SITE-ACQUISITION AND EXTENSIVE ENHANCEMENT.	Columbia River Island, near Deer Island. Cottonwood forests and pasture, with dredge spoils.
*** GRAND ISLAND							
536	YAMHILL	40.00	2.5: TES-0; BIODIVERSITY-1; FISH-0.5; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON	LOWLAND WETLAND RIPARIAN RIVERINE BAR	SITE-ACQUISITION.	HERON ROOKERY (15 NESTS) IN RIPARIAN FOREST OF BLACK COTTONWOOD, OREGON ASH, WILLOWS, AND AN UNDERSTORY OF REED CANARYGR
• ** GRANT AND HAVEN ISLANDS							
630	CLATSOP	100.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: BLACKTAIL DEER WATERFOWL SENSITIVE SPECIES: BALD EAGLE FORAGING SHOREBIRDS	WETLANDS CONIFEROUS FOREST DECIDUOUS FOREST COTTONWOOD FOREST TIDAL MUDFLATS	SITE-ACQUISITION.	LOWER COLUMBIA RIVER ISLANDS IN YOUNG'S RIVER ESTUARY
*** GREEN PETER WINTER RANGE							
697	LANE	280.00	4.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-1	TARGET SPECIES: GROUSE, ELK SENSITIVE SPECIES: SPOTTED OWL BIG GAME WINTER RANGE-ELK	RIPARIAN OLD GROWTH FOREST	SITE-ACQUISITION AND ENHANCEMENT.	LOW ELEVATION SOUTH SLOPE HEAVILY USED BY WINTERING ELK
*** HARPER'S BEND HERONRY							
486	LANE	40.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0		RIPARIAN HERON ROOKERY	SITE-ACQUISITION.	Heron rookery and riparian on Willamette River, on Valley bottom.
*** HAYDEN & HUMBUG LAKES							
527	POLK	320.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SWANS DUSKY CANADA GEESE	WETLAND	SITE-ACQUISITION.	Wetland and riparian bottomland.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
*** HAYDEN ISLAND							
657	MULTNOMAH	300.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: BLACKTAIL DEER, GEESE, MINK WATERFOWL SENSITIVE SPECIES: TURTLES (PAINTED?) SHOREBIRDS FURBEARERS OSPREY NESTING AND FORAGING	WETLANDS COTTONWOOD LOWLANDS TIDAL MUDFLATS RIPARIAN	SITE-ACQUISITION. West end only appropriate for mitigation.	Cottonwood and ash riparian habitats and sandy meadows.
• ** HOLMES GAP							
529	POLK	320.00	2.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-0; ONSITE-0		OAK WOODLAND GRASSLAND	SITE-ACQUISITION.	Oak woodland and native and introduced grasslands.
• ** INDEPENDENCE BEND							
514	MARION	120.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GEESE GREAT BLUE HERON	RIPARIAN BOTTOMLAND	SITE-ACQUISITION.	Heron rookery along Willamette Valley bottomland with riparian.
• ** JACKSON BOTTOM							
383	WASHINGTON	2500.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL	WETLAND BOTTOMLAND	SITE-ACQUISITION AND ENHANCEMENT.	Wetlands and bottomland riparian, with developed farmland. Important for geese but with restoration potential.
*** JOHN DAY RIVER WETLANDS							
636	CLATSOP	800.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: MINK, GEESE WATERFOWL SENSITIVE SPECIES: BALD EAGLE ROOSTING, PEREGRINE FALCON FORAGING SHOREBIRDS	WETLANDS RIPARIAN SPRUCE SWAMP (SMALL)	SITE-ACQUISITION.	Spruce wetlands, tidal sedge wetlands, saltmarshes near mouth of Columbia River.
*** JUNCTION CITY MARSH							
385	LANE	40.00	1.0: TES-0; BIODIVERSITY-0; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL	WETLAND	SITE-ACQUISITION.	Fresh water marsh with water birds.
• ** KINGSTON MEADOWS							

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
261	LINN	90.00	5.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: QUAIL, DEER BIG GAME: DEER WESTERN MEADOWLARK, HORNED LARK	SEASONAL RIPARIAN NATIVE GRASSLANDS OAK SAVANNA	SITE-ACQUISITION.	This is a Willamette Valley grassland site with several seasonal creeks flowing thorugh it. It is located along the east
• ** LITTLE NORTH SANTIAM MACROSITE							
83	MARION CLACKAMAS	16000.00	5.5: TES-1; BIODIVERSITY-3; FISH-0.5; PRIORITYHAB-1; ONSITE-0	SPOTTED OWL	RIPARIAN OLD GROWTH FOREST	SITE-ACQUISITION OF OLD-GROWTH HABITATS.	The Little North Fork Macrosite is a 37,725 acre low to mid-elevation drainage in the West Cascades. It is the largest r
• ** LITTLE WALLACE ISLAND							
241	COLUMBIA	200.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: SENSITIVE SPECIES: BALD EAGLE FORAGING, WHITE-TAILED DEER WATERFOWL: MIGRATORY, WINTERING SHOREBIRDS:	COLUMBIA RIVER RIPARIAN COTTONWOOD LOWLANDS WETLANDS TIDAL MUDFLATS	SITE-ACQUISITION.	Columbia River Island, with cottonwood riparian woodlands, wetlands, and tidal flats.
• ** LONG TOM RIVER							
722	LANE BENTON		4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES-BLACKTAIL DEER, MINK, BEAVER, RUFFED GROUSE, PHEASANT, QUAIL, WOOD DUCK, YELLOW WARBLER SENSITIVE SPECIES: POND TURTLE BIG GAME: DEER	ASH WOODLANDS TUFTED HAIRGRASS BOTTOMLANDS RIPARIAN WOODLAND OAK-ASH WOODLAND	AREA-ACQUISITION, WITH SOME PUBLIC LAND ENHANCEMENTS.	Ash bottomlands, native wet prairie remnants, vernal pools, and oak woodlands in matrix with improved pasture and rural
• ** LORD ISLAND							
647	COLUMBIA	400.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL HERON BALD EAGLE	WETLAND RIPARIAN COTTONWOOD LOWLAND TIDAL MUDFLAT WILLOW WETLAND	SITE-ACQUISITION. One of the larger Islands, with minimal dredge spoils. Enhancement and restor	Large Columbia River Island, riparian cottonwood-ash forest and emergent marsh.
• ** LUCKIAMUTE RIVER							
526	POLK		3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	MAY HAVE TURTLES AND OREGON CHUB, IF SO, RANKING SHOULD BE HIGHER	RIPARIAN LOWLAND WETLAND	AREA-ACQUISITION.	BROAD RIPARIAN WOODLAND OF BIGLEAF MAPLE AND OREGON ASH WITH A DENSE UNDERSTORY OF SNOWBERRY, HAZELNUT, AND BLACKBERRY,
• ** MARSHALL ISLAND HERONRY							
488	LANE	120.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0		RIPARIAN SLOUGH HERON ROOKERY	SITE-ACQUISITION.	Willamette River bottomland riparian and heron rookery.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
. ** MCBEE LAKE/SLOUGH							
470	BENTON	120.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	POND TURTLE SALAMANDERS		SITE-ACQUISITION.	Oxbows and wetland bottomlands along Willamette River near Corvallis.
. ** MCKENZIE [illegible] ISLAND							
485	LANE	120.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0		RIPARIAN RIVER ISLAND	SITE-ACQUISITION.	RIPARIAN ALONG MCKENZIE RIVER, WITH COTTONWOOD, WILLOW AND ALDER.
. ** MCKINNEY BOTTOM							
518	MARION	60.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON	RIPARIAN RIVERINE SLOUGH LOWLAND WETLAND	SITE-ACQUISITION.	HERON ROOKERY ON FORESTED ALLUVIAL ISLAND WITH BLACK COTTONWOOD, WILLOW, BIGLEAF MAPLE AND FIR, DISSECTED BY NUMEROUS SL
*** MOLLALA RIVER - MILL CREEK							
476	CLACKAMAS	500.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0		RIPARIAN	SITE-ACQUISITION.	Riparian ash and cottonwood riparian in Willamette Valley.
*** MOOSE RIDGE							
495	LINN	640.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0		OLD GROWTH FOREST	SITE-ACQUISITION.	Old growth conifer forest.
. ** MOSS LAKE							
515	MARION	40.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0		WETLAND BOG	SITE-ACQUISITION.	Montane lake and associated wetlands.
. ** MOTT ISLAND							
634	CLATSOP	100.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: WATERFOWL, FURBEARERS WATERFOWL SENSITIVE SPECIES: BALD EAGLE FORAGING SHOREBIRDS	RIPARIAN COTTONWOOD LOWLANDS TIDAL MUDFLATS WILLOW FOREST TIDAL MARSH WAPATO WETLAND	SITE-ACQUISITION.	Columbia River Island, with cottonwood riparian bottoms, mudflats and wetlands, willow woodlands and wapato.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** MOUNT PISGAH							
484	LANE	2500.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	POND TURTLES	RIPARIAN WOODLAND	SITE-ACQUISITION.	Includes the County Park and the Coast Fork of the Willamette River. Nearby Wildish Sand & Gravel site considered separa
*** MUDDY CREEK							
723	BENTON		4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES-BLACKTAIL DEER, MINK, BEAVER, RUFFED GROUSE, PHEASANT, QUAIL, WOOD DUCK, YELLOW WARBLER SENSITIVE SPECIES: POND TURTLE BIG GAME: DEER	ASH WOODLANDS TUFTED HAIRGRASS BOTTOMLANDS RIPARIAN WOODLAND OAK-ASH WOODLAND	AREA-ACQUISITION AND ENHANCEMENT.	Wetlands, ash woodlands, oak woodlands native prairie and endangered species habitats.
• ** MUDDY VALLEY							
537	YAMHILL		2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0		OAK WOODLAND	AREA-ACQUISITION.	Oak woodland, bottomland riparian, farmland matrix.
• ** NEWELL CREEK CANYON							
663	CLACKAMAS	100.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: TURTLES (?) TARGET SPECIES: CALIFORNIA QUAIL, RING-NECKED PHEASANT, BLACKTAILED DEER TERRESTRIAL FURBEARERS SONGBIRDS HERPTILES RAPTORS	RIPARIAN CONIFERS	SITE-ACQUISITION.	RIPARIAN AREA WITH CONIFEROUS WOODLAND NEAR OREGON CITY.
• ** NORTH CORVALLIS							
493	LINN	120.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0		HERON ROOKERY	SITE-ACQUISITION.	Riparian area and heron rookery along Willamette River.
• ** NORTH SANTIAM RIVER							
517	MARION	2000.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0		RIPARIAN	SITE-ACQUISITION. Area poorly defined.	Riparian bottomland in Willamette Valley, on the North Santiam River.
• ** OAK ISLAND							

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
525	MULTNOMAH	600.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: DUSKY CANADA GOOSE, SANDHILL CRANE TARGET SPECIES: CALIFORNIA QUAIL	OAK SAVANNA	SITE-ACQUISITION. Also significant enhancements and restoration potential.	Improved pasture and open Oregon oak woodlands.
• ** OLD MCGRUDER RANCH							
641	COLUMBIA		2.0: TES-1; BIODIVERSITY-0; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL SENSITIVE SPECIES: CRITICAL COLUMBIA WHITETAIL DEER HABITAT, DUSKY CANADA GEESE TARGET SPECIES: GEESE	WETLAND RIPARIAN COTTONWOOD LOWLAND TIDAL MUDFLATS	SITE-ACQUISITION. Conservation easement or management plan are probably more cost effective tha	Cottonwood forest with riparian wetlands, tidal mudflats and other lower Columbia River bottomland habitats.
• ** PETERSON BUTTE							
489	LINN	2000.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0		GRASSLAND OAK WOODLAND	SITE-ACQUISITION. Acreage and area only approximate, site poorly defined.	Oak woodland, grassland, and pasture in Willamette Valley.
• ** PHILOMATH PRAIRIE							
157	BENTON	60.00	2.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-0; ONSITE-0		GRASSLAND DOUGLAS FIR FOREST OAK SAVANNA	SITE-ACQUISITION. Important natural area, with significant wildlife benifits. Site overall has	Grassland on gently-sloping hills with north-, south- and west-facing slope; a few Quercus garryana trees widely spaced
• ** PUDDING RIVER							
506	MARION	320.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: DUSKY CANADA GEESE WATERFOWL	BOTTOMLAND WETLAND	SITE-ACQUISITION. Area poorly defined.	Riparian bottomland in the Willamette River, with cottonwood and alder, and associated wetlands and farmland.
• ** RATTLESNAKE BUTTE							
17	LANE	300.00	4.0: TES-0; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: BLACKTAIL DEER, YELLOW WARBLERS, WOODPECKERS BIG GAME: DEER SENSITIVE SPECIES: RATTLESNAKES	NATIVE GRASSLANDS OAK WOODLAND DECIDUOUS FOREST	SITE-ACQUISITIONS. Additions to a TNC preserve.	Site is part of a northwest-southeast oriented, flat, basalt-topped ridge at the western margin of the southern portion
• ** ROCK ISLAND							
664	CLACKAMAS	100.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: TURTLES (?) SHOREBIRDS WATERFOWL TARGET SPECIES: MINK, BLACKTAILED DEER, MALLARDS, UPLAND GAME	WETLANDS RIPARIAN MIXED DECIDUOUS CONIFER	SITE-ACQUISITION.	Island in the Willamette River, by West Linn. Douglas fir woodland, cliffs and some disturbed shrublands.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** SALMON RIVER MEADOWS							
659	MULTNOMAH	160.00	5.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: MINK, DEER, ELK SENSITIVE SPECIES: CRANES BIG GAME: BLACKTAIL DEER, ELK SHOREBIRDS SONGBIRDS UPLAND GAME BIRDS	WETLANDS RIPARIAN MIXED DECIDUOUOS FOREST CONIFEROUS FOREST	SITE-ACQUISITION. (POTENTIAL PUBLIC LAND ENHANCEMENT?)	Mixed coniferous-deciduous forest with riparian and wetlands in Cascades.
• ** SANDY RIVER GORGE							
477	CLACKAMAS MULTNOMAH	1000.00	5.5: TES-1; BIODIVERSITY-3; FISH-0.5; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: PILEATED WOODPECKER, SAW-WHET OWL, ANADROMOUS FISH BLACK BEAR COUGAR ELK OSPREY	RIPARIAN OLD GROWTH FOREST RIVERINE	SITE-ACQUISITION AND POTENTIAL ENHANCEMENT FOR PUBLIC LANDS AND PRIVATE NON-PROFITS.	LARGE FREE-FLOWING RIVER, CLIFFS, AND STEEP CANYON WALLS WITH FLAT STREAM TERRACES AND RIVER ISLANDS. UNDISTURBED OLD GR
• ** SANTIAM BAR							
530	POLK	300.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON	RIPARIAN LOWLAND WETLAND LOWLAND POND RIVERINE BAR	SITE-ACQUISITION.	LARGE, DIVERSE RIPARIAN FOREST WITH OREGON ASH, BLACK COTTONWOOD, AND BIGLEAF MAPLE; ALSO PRESENT ARE A POND AND SEASONA
• ** SANTIAM RIVER PROPERTY							
693	LINN	464.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	HERON ROOKERY OSPREY CANADA GEESE TARGET SPECIES: BLACKTAIL DEER WATERFOWL SENSITIVE SPECIES: BALD EAGLE FORAGING, POND TURTLES, ANADRAMOUS FISH-STEELHEAD AND SALMON	RIPARIAN	SITE-ACQUISITION.	
• ** SAUVIE ISLAND: PETERSON PROPERTY							

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
390	COLUMBIA	300.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: BLACKTAILED DEER SENSITIVE SPECIES: BALD EAGLE FORAGING, PEREGRINE FALCON FORAGING, DUSKY CANADA GEESE WATERFOWL: MIGRATORY, WINTERING SHOREBIRDS: AQUATIC FURBEARERS AQUATIC REPTILES RAPTORS	WETLANDS RIPARIAN COTTONWOOD LOWLANDS MUDFLATS	SITE-ACQUISITION. Additions to Sauvie Island WMA.	Wetlands, riparian, cottonwood riparian forests and mudflats on Sauvie Island, by the WMA.
• ** SCAPPOOSE BAY AND SCAPPOOSE FLATS							
655	COLUMBIA	2600.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: BLACKTAIL DEER, MINK (FURBEARERS) WATERFOWL SENSITIVE SPECIES: BALD EAGLE NEST, TURTLE (PAINTED?) RARE PLANTS	WETLANDS COLUMBIA RIVER RIPARIAN COTTONWOOD LOWLAND TIDAL MUDFLATS WAPATO WETLAND	SITE-ACQUISITION.	Wetlands, riparian forests, and pasture along Columbia River by Scappoose.
• ** SOUTH SHORE COLUMBIA RIVER							
648	COLUMBIA	75.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: SCAUP WATERFOWL SENSITIVE SPECIES: BALD EAGLE NEST OSPREY NESTING AND FORAGING	WETLANDS RIPARIAN CONIFEROUS FOREST	SITE-ACQUISITION.	Cottonwood lowland riparian forests, wetlands, and some Douglas fir-bigleaf maple woodlands and pastures.
• ** SPRING HILL ROAD							
534	WASHINGTON		2.0: TES-1; BIODIVERSITY-0; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL SENSITIVE SPECIES: DUSKY CANADA GOOSE TARGET SPECIES: MALLARDS, CANADA GOOSE		SITE-ACQUISITION. Area poorly defined.	
• ** STEVENS BOTTOMS							
478	CLACKAMAS	320.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON RIPARIAN SONGBIRDS	RIPARIAN BLACK COTTONWOOD	SITE-ACQUISITION.	Riparian bottomland with Cottonwood, red alder and willow along the Clackamas River, with a bench dominated by second gr
• ** STOUT MOUNTAIN							
679	MARION	600.00	5.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0	PURPLE MARTIN RED LEGGED FROG SHARP TAILED SNAKE WESTERN RATTLESNAKE	WETLAND/BOG GRASSLAND OAK WOODLAND	SITE-ACQUISITION.	Open oak woodlands, mixed conifer forests, wetlands and ponds, and native grasslands in Willamette Valley.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** STUMP OAKS							
528	POLK	50.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0		OAK WOODLAND	SITE-ACQUISITION. May not be available.	OAK FOREST COMPOSED OF OREGON WHITE OAK, BIGLEAF MAPLE, AND HAZELNUT, WITH AN UNDERSTORY OF SNOWBERRY, BLACKBERRY, SWORD
• ** SUBLIMITY GRASSLAND							
10	MARION	40.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: QUAIL, GEESE, BEAVER SENSITIVE SPECIES: FROGS, TURTLES (PAINTED?)	RIPARIAN NATIVE GRASSLAND WETLAND	SITE-ACQUISITION.	Willamette Valley native grassland with a small, second order creek drainage through the middle. It is a complex of gras
• **TALBOT							
522	MARION	60.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON	RIPARIAN SLOUGH	SITE-ACQUISITION. Area poorly defined.	Riparian habitat in Willamette Valley, with wetlands and sloughs.
• ** TUALATIN RIVER REFUGE							
874	WASHINGTON	3060.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: CANADA GOOSE, BLACK-TAIL DEER SENSITIVE SPECIES: DUSKY CANADA GOOSE SONGBIRDS WATERFOWL: MIGRATORY, WINTERING BIG GAME: BLACK-TAIL DEER	OREGON ASH WOODLAND RIPARIAN WETLAND	SITE-ACQUISITION AND ENHANCEMENT. Proposed USFS refuge, for Dusky Canada geese.	Ash woodlands and wetlands and developed farmland between Beaverton and Sherwood.
• ** TYSON ISLAND							
520	MARION	120.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON	RIPARIAN	SITE-ACQUISITION. Area poorly defined.	Great blue heron rookery in Willamette Valley bottom.
• ** WALKER ISLAND							
645	COLUMBIA	100.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SHOREBIRDS SENSITIVE SPECIES: FORAGING BALD EAGLE WATERFOWL	WETLAND RIPARIAN RIVERINE COTTONWOOD LOWLAND TIDAL MUDFLAT WILLOW WETLANDS	SITE-ACQUISITION AND ENHANCEMENT. Dredge spoils in the middle of the island, difficult to resto	Cottonwood riparian (second growth), emergent wetlands, mudflats, and other lower Columbia River habitats.
*** WALLACE ISLAND							
226	COLUMBIA	729.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: SENSITIVE SPECIES: BALD EAGLE FORAGING, WHITE-TAILED DEER WATERFOWL: MIGRATORY, WINTERING SHOREBIRDS:	COLUMBIA RIVER RIPARIAN COTTONWOOD LOWLANDS WETLANDS TIDAL MUDFLATS	SITE-ACQUISITION. Owned by The Nature Conservancy and a private owner.	Cottonwood riparian lowlands, wetlands, tidal mudflats and improved pasture.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** WAPATO LAKE							
875	WASHINGTON YAMHILL	2000.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: CANADA GOOSE, BLACK-TAIL DEER SENSITIVE SPECIES: DUSKY CANADA GOOSE SONGBIRDS WATERFOWL: MIGRATORY, WINTERING BIG GAME: BLACK-TAIL DEER	OREGON ASH WOODLAND RIPARIAN WAPATO WETLAND	SITE-ACQUISITION. Former wapato lakebed, drained, to be restored.	Old lake bed, currently drained and used for onion farming.
• ** WEST EUGENE WETLANDS							
348	LANE	5000.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: POND TURTLE TARGET SPECIES: QUAIL, YELLOW WARBLER, PHEASANT, BEAVER, MINK, BLACKTAIL DEER BIG GAME: BLACKTAIL DEER	ASH WOODLAND TUFTED HAIRGRASS PRAIRIE	SITE-ACQUISITION. Potential for major restoration and enhancement as well. Important to the Cit	Valley bottom grasslands and ash swales with some industrial, agricultural and residential development interspersed. Sur
• ** WHEATLAND BAR							
521	MARION	50.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON	RIPARIAN RIVERINE SLOUGH	SITE-ACQUISITION.	HERON ROOKERY (54 NESTS) ON RIVER BAR IN RIPARIAN FOREST OF BLACK COTTONWOOD, OREGON ASH, AND WILLOW, ISOLATED FROM THE
• ** WILDISH SAND AND GRAVEL							
691	LANE	1000.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	HERON ROOKERY-TWO OSPREY-2 NESTS CANADA GEESE TARGET SPECIES: QUAIL SENSITIVE SPECIES: POND TURTLES, BALD EAGLE USE	RIPARIAN	SITE-ACQUISITION.	Riparian forests, wetlands and ponds (natural and artificial), alder-bigleaf maple-conifer woodlands along mainstem Will
• ** WILKENSON BEND							
491	LINN	40.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON	RIPARIAN LOWLAND WETLAND RIVERINE SLOUGH	SITE-ACQUISITION.	HERON ROOKERY LOCATED ON AN OLD RIVER TERRACE OF BLACK COTTONWOODS. AREA HAS SERIES OF NATURAL DIKES AND SMALL SLOUGHS
• ** WILLOW CREEK							
122	LANE	360.00	5.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: HORNED LARK TARGET SPECIES: QUAIL, MALLARD, FURBEARERS, WESTERN MEADOWLARK LONG-EARED OWL	ASH WOODLAND TUFTED HAIRGRASS PRAIRIE RIPARIAN	SITE-ACQUISITION. Also significant potential for restoration and enhancement.	Example of a native, tufted hairgrass (DESCHAMPSIA CESPITOSA) valley bottom grassland with associated Oregon ash (FRAXIN
• ** WILLOW LAKE							

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
512	MARION	60.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SWANS	SWAN WINTERING AREA	SITE-ACQUISITION.	Oxbow lake along Willamette River, with some riparian and adjacent agriculture.
*** WINDSOR ISLAND							
531	POLK	40.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON	RIPARIAN	SITE-ACQUISITION.	Great blue heron rookery along Columbia River.
** WINKLE BUTTE AND LAKE							
471	BENTON	100.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: RED LEGGED FROGS?	OXBOW LAKE OAK WOODLAND	SITE-ACQUISITION. Area not well defined.	Lake and associated wetlands with adjacent oak woodlands.

91 Records Processed

Appendix C 2. Willamette Basin BPA Mitigation Sites - Public Land Enhancements 29 JAN 1993

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** BALD HILL							
109	BENTON	220.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: HORNED LARK, TURTLES, FROGS TARGET SPECIES: BLACKTAIL DEER, WATERFOWL, BEAVER WATERFOWL BIG GAME	OAK WOODLANDS & SAVANNA CONIFER-DECIDUOUS WOODLAND RIPARIAN WETLAND	SITE-PUBLIC LAND ENHANCEMENT. Some potential acquisition and restoration.	Siterangesin● levation from about 500-800 feet and has areas of upland grassland which formerly dominated the Willamet
• ** BASKET SLOUGH							
740	POLK	240.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: QUAIL, GROUSE SENSITIVE SPECIES: DUSKY GEESE, SHARP-TAILED SNAKE, FENDER'S BLUE BUTTERFLY	WETLAND OAK WOODLANDS	SITE-PUBLIC LAND ENHANCEMENT.	USFWS REFUGE, OPEN GRASSLAND, WETLAND, FARMLAND, AND OAK WOODLAND HABITATS.
• ** BOND BUTTE POND HABITAT MANAGEMENT							
695	LINN	240.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: QUAIL, MALLARD, GROUSE	WETLANDS RIPARIAN	SITE-PUBLIC LAND ENHANCEMENT. PROJECT EMPHASIS ON REDUCING STEEP SIDE SLOPES, REVEGETATION AND	PONDS WITH STEEP BANKS
• ** BOWERS ROCK STATE PARK							
378	BENTON		1.0: TES-0; BIODIVERSITY-0; FISH-0.0; PRIORITYHAB-1; ONSITE-0		WETLAND RIPARIAN SLOUGH	SITE-PUBLIC LAND ENHANCEMENT. RESTORATION ON THE STATE PARK.	RIPARIAN WETLAND, SLOUGHS AND RIPARIAN HABITATS ALONG WILLAMETTE RIVER.
• ** EE WILSON WILDLIFE AREA ENHANCEMENT & ACQUISITION							
696	BENTON	1000.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: CALIFORNIA QUAIL, GROUSE, BLACK TAILED DEER SENSITIVE SPECIES: SHARP-TAILED SNAKE	GRASSLANDS WETLANDS	SITE-PUBLIC LAND ENHANCEMENT. PROJECTS WOULD INVOLVE THE RESTORATION OF WETLANDS, PRAIRIE GRASS	Willamette Valley woodlands, grasslands and bottomland habitats.
• ** FERN RIDGE LAKE							
480	LANE		4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	TURTLES	WETLAND GRASSLAND RIPARIAN	AREA-PUBLIC LAND ENHANCEMENTS AND ACQUISITION.	Large Willamette Valley bottomland area with native wet prairie, ash woodlands, streams and reed canarygrass.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** FINLEY NWR SITE							
286	BENTON	385.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: CANADA GOOSE, BLACK-TAIL DEER SENSITIVE SPECIES: DUSKY CANADA GOOSE, WESTERN POND TURTLE SONGBIRDS WATERFOWL: MIGRATORY, WINTERING BIG GAME: BLACK-TAIL DEER	OREGON ASH WOODLAND RIPARIAN WAPATO WETLAND	SITE-PUBLIC LAND ENHANCEMENT. Important wildlife refuge and natural area, with the potential fo	Wildlife refuge including bottomland grasslands, natural areas, ash riparian and oak woodlands.
• ** JACKSON-FRAZIER WETLAND							
21	BENTON	130.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0		RIPARIAN WETLAND POND	SITE-PUBLIC LAND ENHANCEMENT.	Diverse area of Willamette Valley bottomland wetland at con- fluence of 2 streams; north portion is mosaic of vernal & b
• ** JORYVILLE COUNTY PARK							
505	MARION	120.00	1.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-0; ONSITE-0	BIRDS		SITE-PUBLIC LAND ENHANCEMENT. Potential additions possible.	Willamette Valley bottomland
• ** KARLSON ISLAND							
638	CLATSOP	450.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL HERONRY SENSITIVE SPECIES: BALD EAGLE, POSSIBLE BALD EAGLE TARGET SPECIES: MALLARDS, GEESE	WETLAND RIPARIAN COTTONWOOD LOWLAND	SITE-PUBLIC LAND ENHANCEMENTS. (Owned by USFWS and/or DSL).	Columbia River Island, with natural cottonwood and riparian wetlands, and some tidal wetlands.
• ** LOIS ISLAND							
635	CLATSOP	600.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: FURBEARERS (MINK?) WATERFOWL SENSITIVE SPECIES: BALD EAGLE & PEREGRINE FORAGING SHOREBIRDS	WETLANDS COTTONWOOD RIPARIAN MUDFLATS AND TIDAL MARSH WAPATO WETLANDS	SITE-PUBLIC LAND ENHANCEMENT. Difficult to restore. Toxic problems from Tongue Point, dredge sp	Cottonwood riparian and extensive mudflats, created from dredge spoils from Tongue Point.
• ** LONG TOM RIVER ACEC							
386	LANE	12.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	WESTERN POND TURTLE TARGET SPECIES: CALIFORNIA QUAIL, WESTERN MEADOWLARK	ASH WOODLAND RIPARIAN TUFTED HAIRGRASS PRAIRIE	SITE-PUBLIC LAND ENHANCEMENTS.	Native oak-ash woodland with prairie remnants.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** LUCKIMUTE LANDING GREENWAY PARCEL							
694	POLK	40.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL TARGET SPECIES: BLACK TAILED DEER, YELLOW WARBLER, CALIFORNIA QUAIL	RIPARIAN WETLANDS	SITE-PUBLIC LAND ENHANCEMENT-PROJECT INVOLVES THE DEVELOPMENT OF SHALLOW WATER WETLANDS ADJACEN	
• ** OAK KNOLL/GLASSER							
741	LINN	2000.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: BLACK TAILED DEER, QUAIL SENSITIVE SPECIES: DUSKY GEESE	WETLANDS WOODLANDS	SITE-PUBLIC LAND ENHANCEMENT.? Restoration and enhancement to produce habitat for wintering wat	WETLAND, FORMERLY IMPORTANT WINTERING AREA FOR CANADA GEESE IN WILLAMETTE VALLEY.
• ** SMITH & BYBEE LAKES							
523	MULTNOMAH		4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: PAINTED TURTLES, TRI-COLORED BLACKBIRDS, RED-LEGGED FROGS TARGET SPECIES: MALLARD	RIPARIAN WETLAND	SITE-PUBLIC LAND ENHANCEMENT.	Large lakes at the confluence of the Columbia and Willamette Rivers with riparian woodlands and wetlands. Weedy and dist
*** SOUTH TONGUE POINT							
637	CLATSOP	50.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL FURBEARERS SHOREBIRDS FORAGING EAGLES AND PEREGRINE FALCONS	WETLANDS MUDFLATS RIPARIAN	SITE-PUBLIC LAND ENHANCEMENT.	Wetlands, riparian, and mudflats on dredge spoils near the mouth of the Columbia River, proposed site of Marine Industri

16 Records Processed

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• **ALBEE							
579	UMATILLA	1600.00	5.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GREAT GRAY OWL	OLD GROWTH PONDEROSA PINE BUNCHGRASSLAND	SITE-ACQUISITION	LARGE AREA OF OLD GROWTH PONDEROSA PINE FOREST IN A MOSAIC WITH IDAHO FESCUE GRASSLAND, INCLUDING A VERNAL STREAM-MOIST
• ** ALDER SLOPE/SPRING CREEK							
260	WALLOWA	80.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0		RIPARIAN WETLAND	SITE-ACQUISITION	RIPARIAN WETLAND COMPLEX ON WALLOWA VALLEY MARGIN WITH NUMEROUS SPRINGS AND MIXED ASPEN-MOUNTAIN ALDER/BOG BIRCH FOREST.
• ** ALDER SPRINGS							
621	WALLOWA	120.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	ELK WHITE-TAILED DEER	RIPARIAN QUAKING ASPEN WETLAND	SITE-ACQUISITION. Area and acreage poorly defined.	Springs in mixed ponderosa pine and bunchgrass canyon mosaic.
• ** ANDERSON PARK							
577	UMATILLA	120.00	1.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-0; ONSITE-0		PINE FOREST	SITE-ACQUISITION	PONDEROSA PINE FOREST, ON THE EDGE OF THE COLUMBIA BASIN AND BLUE MOUNTAINS.
• ** ANTELOPE VALLEY							
597	WASCO		2.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-0; ONSITE-0	SWAINSONS HAWK		AREA-ACQUISITION	OPEN GRASSLAND-SHRUBLAND MOSAIC.
• ** BEAR CREEK LAND							
711	CROOK JEFFERSON WHEELER	10390.00	3.5: TES-0; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	WATERFOWL BIG GAME: DEER, ELK SONGBIRDS COUGAR BOBCAT RAPTORS MOUNTAIN QUAIL BEAVER MINK ANADROMOUS FISH	RIPARIAN GRASSLAND RIVERINE	SITE-ACQUISITION	OPEN GRASSLANDS WITH RIPARIAN AND RIVERINE HABITATS. SOME SAGEBRUSH AND JUNIPER HABITATS
• ** BEAR VALLEY							
322	GRANT		4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: UPLAND SANDPIPER NESTING BIG GAME: PRONGHORN CRITICAL WINTER RANGE	WETLAND SAGEBRUSH SHRUBLAND	AREA-ACQUISITION.	Large, montane meadow system with sagebrush/bunchgrass habitats, tufted hairgrass meadows, low sagebrush, and forested w

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** BENNETT POINT RIPARIAN							
900	UNION	200.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: DEER, MINK, WESTERN MEADOWLARK, QUAIL BIG GAME: DEER SENSITIVE SPECIES: WESTERN BLUEBIRD	COTTONWOOD RIPARIAN HAWTHORN RIPARIAN SAGEBRUSH STEPPE/GRASSLAND CANYON SHRUBLAND	SITE-ACQUISITION.	Riparian forest at the edge of the Grande Ronde Valley, with extensive black cottonwood and hawthorn stands, and excepti
• ** BENSEL ROAD							
616	UMATILLA	640.00	5.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-1	SHARP-TAIL GROUSE LONG-BILLED CURLEW SHOREBIRDS MARSHBIRDS	GRASSLAND RIPARIAN SHRUBLAND WETLAND	SITE-ACQUISITION	OPEN SHRUB STEPPE WITH SAGEBRUSH AND JUNIPER, MIXED WITH POTHOLE BASALT LAKES. NEAR CONFORTH RANCH, HAVING SIMILAR VALUE
*** BIG SUMMIT PRAIRIE							
324	CROOK		5.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0	PRONGHORN SAGE GROUSE ELK DEER	PINE FOREST WETLAND GRASSLAND	AREA-ACQUISITION. NOT CURRENTLY AVAILABLE.	VAST WET MEADOW WITH GREAT DIVERSITY OF FORBS, BORDERED BY PONDEROSA PINE FOREST. CRITCAL WINTER RANGE FOR DEER, ELK, AN
• ** BLALOCK MOUNTAIN COMPLEX							
316	UMATILLA	20000.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	ELK		AREA-ACQUISITION.	ELK WINTER RANGE
• ▭ BOX CANYON							
544	JEFFERSON	1000.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0		JUNIPER WOODLAND GRASSLAND	SITE-ACQUISITION.	JUNIPER WOODLAND AND GRASSLANDS.
• ** BRIDGE CREEK - JOHN DAY RIVER							
606	WHEELER	120.00	3.5: TES-0; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON	RIPARIAN	SITE-ACQUISITION.	RIPARIAN BOTTOMLAND ALONG BRIDGE CREEK WITH GREAT BLUE HERON ROOKERY.
• ** BUCK HOLLOW CREEK							
589	WASCO	320.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	WILLOW FLYCATCHER WESTERN BLUEBIRD	GRASSLAND RIPARIAN	SITE-ACQUISITION.	GRASSLAND AND SHRUB STEPPE MOSAIC IN COLUMBIA BASIN, WITH SOME WILLOW-ALDER-BIRCH RIPARIAN.
• ** BUCK HOLLOW CREEK - NORTH							

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
705	WASCO	*5242.00*	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	ENDANGERED SPECIES: BALD EAGLE BIG GAME: DEER, ELK ANADROMOUS FISH: STEELHEAD, SALMON	RIPARIAN GRASSLAND SHRUBLAND	SITE-ACQUISITION.	Riparian and upland grass/sage communities provide habitat for anadromous fish, deer, elk, upland game and nongame birds
• ✉ BUSBY							
633	WASCO	*20.00*	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES WESTERN POND TURTLE	WETLAND POND	SITE-ACQUISITION.	Wetlands and pond with Western Pond Turtle present; oak-grass-pine habitat.
• ** CAMAS PRAIRIE MARSH							
591	WASCO		3.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-0; ONSITE-0		WETLAND	SITE-ACQUISITION.	WETLAND-GRASSLAND
• ** CHERRY CREEK							
712	JEFFERSON WHEELER	58000.00	*3.5:* TES-0; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	WATERFOWL SONGBIRDS BIG GAME: DEER, ELK, ANTELOPE, COUGAR, BOBCAT GOLDEN EAGLE MOUNTAIN QUAIL GROUSE BEAVER MINK ANADROMOUS FISH	RIPARIAN GRASSLAND RIVERINE SHRUBLAND	SITE-ACQUISITION.	Cherry Creek Ranch *controls 8* miles of John Day River, all of Cherry *Creek*, 4 miles of Bear Creek, 2 miles of Bridge Cre
• ** CLARNO-JOHN DAY RIVER							
603	WHEELER	4000.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	GOLDEN EAGLE BIG GAME: WINTER RANGE SONGBIRDS BLUEBIRDS	MOUNTAIN MOHAGANY JUNIPER WOODLAND BUNCHGRASSLAND RIPARIAN COLD SPRING	SITE-ACQUISITION.	ROLLING HILLS DISSECTED BY STEEP-WALLED CANYONS PROVIDE HABITAT FOR BIRDS OF PREY AND SMALL MAMMALS.
*** CLEAR LAKE RIDGE MACROSITE							
26	WALLOWA	3200.00	5.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SHARP-TAIL GROUSE LONG-BILLED CURLEW SHOREBIRDS MARSHBIRDS	GRASSLAND RIPARIAN SHRUBLAND WETLAND	SITE-ACQUISITIONS.	Clear Lake Ridge is a mid-elevation (5,000 foot) grassy ridge located east of the 9,000 foot peaks of the Wallowa Mounta
• ** CLINE BUTTES							
555	DESCHUTES	1000.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0		JUNIPER WOODLAND SHRUB STEPPE/GRASSLAND	SITE-ACQUISITION.	JUNIPER WOODLAND, SAGEBRUSH STEPPE.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
*** COFFEE RANCH							
726	BAKER	2000.00	4.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: QUAIL, MULE DEER WATERFOWL SHOREBIRDS	MEADOWS WETLANDS SAGEBRUSH/BUNCHGRASS STEPPE	SITE-ACQUISITION, AND POTENTIAL ENHANCEMENT.	Powder River Valley bottomland and hillslope, with mixed sagebrush steppe (big sagebrush and three-tip), greasewood bott
• ** COLUMBIA RIVER							
713	HOOD RIVER	60.00	3.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-1		OAK SAVANNA OLD GROWTH FOREST	SITE-ACQUISITION. OWNED BY HOOD RIVER COUNTY AND STATE PARKS.	Oak savanna, old growth forests, and rare plants provide environmental education opportunities.
• ** CONFORTH RANCH							
317	UMATILLA	3188.00	5.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-1	TARGET SPECIES: MEADOWLARK, CALIFORNIA QUAIL, MALLARD, CANADA GOOSE, MINK, DOWNY WOODPECKER, YELLOW WARBLER, SPOTTED SANDPIPER SENSITIVE SPECIES: LONG-BILLED CURLEW WATERFOWL: CANADA GOOSE, DUCKS	SHRUB STEPPE/GRASS EMERGENT WETLAND RIPARIAN FOREST, SHRUBLAND, AND FORBLAND SAND/GRAVEL/COBBLE/MUD POTHOLE LAKES	SITE-ACQUISITION AND ENHANCEMENT. Involves protection of natural habitats and enhancement (ripa	Pothole lakes, wetland marshland in rangeland habitats above Columbia River, near McNary Dam.
• ** CONLEY LAKE							
326	UNION	150.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL SHOREBIRDS MARSHBIRDS SNOW GEESE TUNDRA SWANS	VERNAL LAKE WETLAND	SITE-ACQUISITION.	Playa lake and marsh with snow geese, tundra swans, and other waterfowl; public viewing and educational opportunites.
• ** CROOKED RIVER GORGE							
547	CROOK		4.0: TES-0; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0		JUNIPER WOODLAND TALUS SHRUBLAND GRASSLAND	AREA-ACQUISITION AND PUBLIC LAND ENHANCEMENT.	Steep cliffs, juniper woodland, sagebrush steppe and some narrow riparian along Crooked River Gorge.
• ** DARR FLAT							
318	UMATILLA	2500.00	5.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WESTERN BURROWING OWL LONG-BILLED CURLEW WHITE-TAILED JACKRABBIT	GRASSLAND RIPARIAN	SITE-ACQUISITION. MAY NOT BE FOR SALE.	REMNANT IDAHO FESCUE GRASSLAND STEPPE VEGETATION ON ROLLING HILLS SUPPORT SEVERAL SPECIES OF CONCERN. AN OVERGRAZED WILL
• ** DEADHORSE LAKE							
625	WALLOWA	1000.00	4.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-0; ONSITE-0		SUBALPINE LAKE GRASSLAND PINE FOREST	SITE-ACQUISITION. INHOLDING IN USFS AREA.	LAKE ON GRASSY RIDGE WITH SCABLANDS, NATIVE FESCUE PRAIRIE AND ADJACENT OPEN PONDEROSA PINE WOODLANDS.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** DESCHUTES ISLAND							
596	WASCO	60.00	*3.0:* TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-1	GREAT BLUE HERON	RIPARIAN	SITE-ACQUISITION.	BLUE HERON ROOKERY ON DESCHUTES RIVER, WITH RIPARIAN VALUES.
• ** DESCHUTES RIVER							
710	WASCO		*3.5:* TES-0; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	WATERFOWL SONGBIRDS BIG GAME MINK HERON OSPREY UPLAND BIRDS ANADROMOUS FISH	RIPARIAN	AREA-ACQUISITION WITH SOME ENHANCEMENT ON THE WARM SPRINGS RESERVATION.	Area from Trout Creek to the northern boundary of the Warm Springs Reservation (25 miles) has riparian and other habitat
• ** DRY MOUNTAIN							
873	HARNEY		4.0: TES-0; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: MULE DEER, ELK BIG GAME: WINTER RANGE SONGBIRDS	CONIFER FOREST JUNIPER WOODLAND SAGEBRUSH/BUNCHGRASS	SITE-ACQUISITION. INHOLDING IN BLM LANDS.	Upland forest, juniper, low sagebrush mosaic.
• ** EBELL CREEK RIPARIAN							
715	BAKER	2000.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: SWAINSON HAWK TARGET SPECIES: MULE DEER, MINK, YELLOW WARBLER, QUAIL SONGBIRDS	RIPARIAN WOODLAND & SHRUBLAND SAGEBRUSH STEPPE/GRASS JUNIPER WOODLAND PONDEROSA PINE FOREST	SITE-ACQUISITION AND ENHANCEMENT. Potential riparian restoration area, with exceptional wildlif	Riparian area and ajacent uplands, needing some restoration, but in very good condition.
• ** EDEN BENCH							
623	WALLOWA	320.00	5.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0		PINE FOREST BUNCHGRASSLAND COLD SPRING	SITE-ACQUISITION.	Ponderosa pine forest, grassland mosaic with some springs.
• ** FALL CREEK ISLAND							
573	SHERMAN	120.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON		SITE-ACQUISITION.	Great blue heron rookery in central Oregon, with riparian habitats.
• ** FINDLEY BUTTES							
619	WALLOWA	4000.00	5.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SWAINSONS HAWK FERRUGINOUS HAWK GOLDEN EAGLE WESTERN BURROWING OWL WHITE-TAILED JACKRABBIT ELK	GRASSLAND RIPARIAN PINE FOREST QUAKING ASPEN	SITE-ACQUISITION. MAY NOT BE AVAILABLE.	BASALTIC CONES RISING ABOVE ROLLING PRAIRIE, COVERED BY GRASSLAND-STEPPE VEGETATION, PLUS SMALL STANDS OF ASPEN, PONDERO

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** FINLEY BUTTES							
567	MORROW	640.00	5.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0		GRASSLAND	SITE-ACQUISITION.	Native Columbia Basin bunchgrass communities.
• ** FINNEGAN CANYON							
570	SHERMAN	2500.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GOLDEN EAGLE	BUNCHGRASSLAND SAGEBRUSH GRASSLAND	SITE-ACQUISITION. POOR INFORMATION AVAILABLE.	Columbia Basin grassland and sagebrush steppe.
• ** FOUR HILLS GRASSLAND							
600	WASCO	1000.00	1.0: TES-0; BIODIVERSITY-0; FISH-0.0; PRIORITYHAB-1; ONSITE-0		BUNCHGRASSLAND	SITE-ACQUISITION.	Columbia Basin grassland
• ** FRAZIER MOUNTAIN							
610	UNION	640.00	1.0: TES-1; BIODIVERSITY-0; FISH-0.0; PRIORITYHAB-0; ONSITE-0	SPRUCE GROUSE	CONIFEROUS WOODLAND	SITE-ACQUISITION.	CONIFER WOODLAND WITH DOUGLAS AND GRAND FIR.
• G.I.							
551	CROOK	4800.00	5.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL SHOREBIRDS WESTERN BURROWING OWL SAGE GROUSE FERRUGINOUS HAWK PRONGHORN ? REDBAND TROUT	WETLAND JUNIPER WOODLAND GREASEWOOD SHRUBLAND	SITE-ACQUISITION.	EXTENSIVE MARSH OF SEDGES, RUSHES, GRASSES AND SURROUNDING UPLAND OF GREASEWOOD, SAGEBRUSH AND JUNIPER PROVIDE HABITAT F
*** GLAZE MEADOW							
556	DESCHUTES	640.00	3.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-0; ONSITE-0		PINE FOREST WETLAND GRASSLAND	SITE-ACQUISITION.	Bunchgrass meadow in open Ponderosa pine forest, near Black Butte.
*** GOVERNMENT COVE							
703	HOOD RIVER	100.00	4.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-1	TARGET SPECIES SENSITIVE SPECIES WATERFOWL SHOREBIRDS SONGBIRDS BALD EAGLE PEREGRINE FALCON FORAGING OSPREY PURPLE MARTIN NEST AQUATIC FURBEARERS	WETLAND RIPARIAN	SITE-ACQUISITION.	

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
*** GRANITE CREEK							
559	GRANT	640.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	ANADROMOUS FISH	RIPARIAN WETLAND SHRUBLAND PINE FOREST	SITE-ACQUISITION.	UNDISTURBED PORTION OF CREEK AND RIPARIAN VEGETATION PROVIDE FISH SPAWNING HABITAT.
. ** GRIZZLY MOUNTAIN							
550	CROOK	1000.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0		PINE FOREST SAGEBRUSH SHRUBLAND COLD SPRING	SITE-ACQUISITION.	Ponderosa pine woodland-forest with sagebrush steppe, and springs.
. ** HAY CREEK							
543	JEFFERSON	52800.00	2.5: TES-0; BIODIVERSITY-1; FISH-0.5; PRIORITYHAB-1; ONSITE-0	ANADROMOUS FISH BIG GAME: ELK, DEER, BOBCAT WATERFOWL SONGBIRDS MOUNTAIN QUAIL GOLDEN EAGLE BEAVER MINK	GRASSLAND SAGEBRUSH SHRUBLAND RIPARIAN RIVERINE	SITE-ACQUISITION.	Hay Creek Ranch controlls several small creeks that were anadromous tributaries to the Deschutes River; there are two re
*** HOT LAKE							
646	UNION	80.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PROIRITYHAB-1; ONSITE-0	SENSITIVE SPECIES: PAINTED TURTLE WATERFOWL SHOREBIRDS BIG GAME UPLAND BIRDS NONGAME BIRDS	WETLAND	SITE-ACQUISITION. Additions to the Ladd Marsh WMA.	Tule wetlands with some alkaline bottomland wetlands and adjacent farmlands.
*** HUSTON LAKES							
548	CROOK	120.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL	WETLAND LOWLAND LAKE	SITE-ACQUISITION.	Lowtomid● levation lake.
. ** IMBLER OXBOW							
240	UNION	120.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: TARGET SPECIES: MULE DEER, MINK, YELLOW WARBLERS, MEADOWLARK, QUAIL WATERFOWL SHOREBIRDS	RIPARIAN LAKE SAND/COBBLE/MUD TUFTED HAIRGRASS	SITE-ACQUISITION.	Oxbow lake with hawthorn riparian area, and some tufted hairgrass wetlands

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
*** INDIAN CREEK RANCH							
560	GRANT	3000.00	5.5: TES-1; BIODIVERSITY-3; FISH-0.5; PRIORITYHAB-1; ONSITE-0	DEER ELK SWAINSONS HAWK	WETLAND BOG OLD GROWTH PONDEROSA PINE HOT SPRING COLD SPRING	SITE-ACQUISITION.	HOT AND COLD SPRINGS CREATE A BOG ON A BENCH ABOVE INDIAN CREEK SURROUNDED BY MEADOWS AND OLD GROWTH PONDEROSA PINE. THE
. ** JACKKNIFE CANYON							
572	SHERMAN		3.0: TES-0; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-0; ONSITE-0		BUNCHGRASSLAND	AREA-ACQUISITION.	Native grasslands, riparian bottomlands and some sagebrush steppe.
*** JOHN DAY FOSSIL BEDS - CLARNO							
607	WHEELER	1200.00	3.0: TES-0; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-0; ONSITE-0	GOLDEN EAGLE	GRASSLAND JUNIPER WOODLAND	SITE-ACQUISITION.	
*** JOHN DAY FOSSIL BEDS - PAINTED HILLS							
608	WHEELER		3.5: TES-0; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0		RIPARIAN GRASSLAND JUNIPER WOODLAND	AREA-ACQUISITION. Some public land enhancements possible on the National Monument.	Ash hills, juniper, big sagebrush and low sagebrush steppe, and native bunchgrasslands, and some riparian habitats● long
. ** JOHN DAY RIVER-FROM CLARNO TO [illegible] CREEK							
672	SHERMAN GILLIAM WASCO WHEELER		4.5: TES-1; BIODIVERSITY 2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: GEESE, MINK UPLAND GAME BIRDS SONGBIRDS FURBEARERS	RIPARIAN MUD/SAND/COBBLE WETLAND SHRUB STEPPE/GRASS	AREA-ACQUISITION. Major river area, including a number of potential sites along the John Day Ri	Major river, including riparian forest, canyon grasslands and shrublands, and irrigated farmland along the river.
. ** JOHN DAY RIVER-FROM THE FALLS TO CLARNO							
671	SHERMAN GILLIAM		4.5: TES-1; BIODIVERSITY 2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: GEESE, MINK UPLAND GAME BIRDS SONGBIRDS FURBEARERS	RIPARIAN MUD/SAND/COBBLE WETLAND SHRUB STEPPE/GRASS	AREA-ACQUISITION. Major river area, including a number of potential sites along the John Day Ri	Major river, including riparian forest, canyon grasslands and shrublands, and irrigated farmland along the river.
. ** JOHN DAY RIVER-MOUTH TO JOHN DAY RIVER FALLS							
670	SHERMAN GILLIAM	5000.00	5.5: TES-1; BIODIVERSITY 2; FISH-0.5; PRIORITYHAB-1; ONSITE-1	TARGET SPECIES: GEESE, MINK UPLAND GAME BIRDS SONGBIRDS FURBEARERS	RIPARIAN MUD/SAND/COBBLE WETLAND SHRUB STEPPE/GRASS	SITE-ACQUISITION. Area also has potential for public land enhancement and restoration and recov	Low elevation riparian and canyon habitat

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
*** LADD MARSH							
28	UNION	354.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: BOBOLINK, SWAINSONS HAWK, TURTLES TARGET SPECIES: DEER, GEESE, MINK, YELLOW WARBLERS SONGBIRDS BIG GAME: MULE DEER, WHITETAIL DEER, ELK SHOREBIRDS	TUFTED HAIRGRASS WETLAND SAGEBRUSH STEPPE/BUNCHGRASS BLACK HAWTHORN SLOPES RIPARIAN WETLANDS	SITE-ACQUISITION PLUS PUBLIC LAND ENHANCEMENT. Areas with potential mitigation on the WMA, as w	Valley bottom remnant with native wetlands (tule-cattail, spikerush, and tufted hairgrass wetlands), some riparian, some
** LITTLE DESCHUTES RIVER							
557	DESCHUTES	400.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL SHOREBIRDS MARSHBIRDS	PINE FOREST WETLAND GRASSLAND	SITE-ACQUISITION.	LARGE WET MARSH AT CONFLUENCE OF DESCHUTES AND LITTLE DESCHUTES RIVERS PROVIDES HABITAT FOR WATERFOWL, SHOREBIRDS, AND M
** LITTLE SUMMIT PRAIRIE							
549	[illegible]	1200.00	5.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: SANDHILL CRANES BIG GAME: ANTELOPE, ELK, MULE DEER SONGBIRDS SHOREBIRDS	WETLAND RIPARIAN GRASSLAND	SITE-ACQUISITION. MAY NOT BE AVAILABLE.	Native wet prairie and montaine meadow with tufted hairgrass, sedges and some willow riparian. Patches of Ponderosa pine
** LOGAN VALLEY							
609	GRANT	2400.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	UPLAND SANDPIPER SANDHILL CRANE SHOREBIRDS MARSHBIRDS	RIPARIAN WETLAND	SITE-ACQUISITION. MAY NOT BE AVAILABLE.	Mountain meadow with tufted hairgrass and sedge bottoms, willow riparian, lodgepole pine and aspen wetlands, and some po
*** LONG PRAIRIE							
562	GRANT	1000.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	HAWKS (FERRUGINOUS & SWAINSONS)	JUNIPER WOODLAND GRASSLAND RIPARIAN	SITE-ACQUISITION.	ROLLING, HILLY, NON-FORESTED STEPPE WITH A MOSAIC OF JUNIPER WOODLANDS AND BUNCHGRASS COMMUNITIES, AND SOME RIPARIAN FOR
** LOSTINE RIVER BIGHORN WMA							
622	WALLOWA	960.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	BIGHORN SHEEP ELK DEER	CONIFEROUS FOREST GRASSLAND	SITE-ACQUISITION TO EXISTING WMA.	GRASSLANDS AND CLIFF AREAS ALONG LOSTINE RIVER ARE CRITICAL WINTER RANGE FOR BIGHORN SHEEP, ELK, AND DEER.
** LOWER GRASS VALLEY CANYON							
571	SHERMAN		2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	LONG-BILLED CURLEW GOLDEN EAGLE	RIPARIAN	AREA-ACQUISITION.	Native bunchgrass slopes, sagebrush steppe and some dryland agriculture.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
*** MALHEUR LAKE MITIGATION TRACTS							
656	HARNEY	35956.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SHOREBIRDS WATERFOWL	WETLAND SHRUB/STEPPE LAKE	SITE-ACQUISITION. Project proposes four tracts as additions to Malheur NWR and includes water r	Wetlands, alkaline bottomlands, wildrye, lakeshore and riparian habitats along Malheur Lake.
*** MEADOW CREEK MESA							
613	UNION	1200.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0		BUNCHGRASSLAND	SITE-ACQUISITION.	Native bunchgrasss with some steppe and open pine woodland.
. ** METOLIUS DEER WINTER RANGE							
545	JEFFERSON	640.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	DEER CALIFORNIA QUAIL MEADOWLARK	PINE FOREST RIPARIAN JUNIPER WOODLAND SHRUBLAND	SITE-ACQUISITION.	WINTERING FOR 3,000-4,000 DEER ALONG THE METOLIUS RIVER. THE WESTERN PORTION IS PONDEROSA PINE FOREST WITH BITTERBRUSH;
. ** MIDDLE FORK OF THE JOHN DAY RIVER MACROSITE							
8	GRANT	6400.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	ANADROMOUS FISH ENDANGERED SPECIES: PEREGRINE FALCON BIG GAME: DEER, ELK OSPREY	RIVERINE RIPARIAN	SITE-ACQUISITION, AND ENHANCEMENTS FOLLOWING. Important values both for wildlife and anadramous	The site includes 17 miles of the Middle Fork of the John Day River from Phippe Meadow to Galena, the adjacent sedge mea
. ** MILL CREEK							
661	HARNEY	160.00	2.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-0; ONSITE-0	ENDANGERED SPECIES: BALD EAGLE ROOST	CONIFEROUS FOREST	SITE-ACQUISITION.	Upland forest with known bald eagle roosting site; trees are threatened by logging.
. ** MILL CREEK DRAINAGE							
592	WASCO		4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	LEWIS WOODPECKER BIG GAME: WINTER RANGE	GRASSLAND OAK WOODLAND BITTERBRUSH SHRUBLAND	AREA-ACQUISITION.	Oak-pine woodland mix, with bitterbrush-sagebrush mixed steppe and bunchgrasses, along the edge of the East Cascades.
*** MILL CREEK RIDGE							
716	WASCO	40.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: LEWIS WOODPECKER TARGET SPECIES: MULE DEER, QUAIL SONGBIRDS	CONIFER WOODLANDS OAK WOODLAND SHRUB STEPPE/BUNCHGRASS	SITE-ACQUISITION. Area includes TNC preserve, BLM lands a to be protected, a USFS Natural Area, a	The site, at 2800 foot elevation, is the end of a long, ● xtended ridge which runs east and west and occurs *at* the ecoton

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** MOSIER CREEK							
594	WASCO	80.00	4.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-1	WATERFOWL SENSITIVE SPECIES: WESTERN POND TURTLE ENDANGERED SPECIES: BALD EAGLE OSPREY SHOREBIRDS	PINE-FIR FOREST OAK WOODLAND GRASSLAND RIPARIAN POND	SITE-ACQUISITION.	Shallow water, ponds, riparian and other hardwood vegetation provide habitat for waterfowl, turtles, birds of prey, and
• ** MYRTLE CREEK							
662	HARNEY	96.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: REDBAND TROUT, MOTTLED SCULPIN	RIPARIAN	SITE-ACQUISITION.	Riparian bottomland and wetlands.
• ** NICHOLL CREEK							
665	HARNEY	591.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: REDBAND TROUT BIG GAME: DEER, ELK	RIPARIAN	SITE-ACQUISITION.	Riparian habitat and important big game winter range.
• ** NINEMILE SLOUGH							
872	HARNEY	2000.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: CALIFORNIA QUAIL, CANADA GOOSE, YELLOW WARBLER SENSITIVE SPECIES: SANDHILL CRANE SONGBIRDS SHOREBIRDS	RIPARIAN SHRUBLAND WETLANDS	SITE-ACQUISITION AND RESTORATION, WITH SOME PUBLIC LANDS ENHANCEMENT. Burns Piute wetland resto	Alkali wetlands in Malheur Basin.
• ** NORTH FORK UMATILLA RIVER							
580	UMATILLA	2000.00	5.5: TES-1; BIODIVERSITY-3; FISH-0.5; PRIORITYHAB-1; ONSITE-0	MARGINED SCULPIN FISH SPAWNING SENSITIVE SPECIES: BLACK-BACKED WOODPECKERS	RIPARIAN DOUGLAS FIR FOREST RIVERINE	SITE-ACQUISITION. Inholdings in the Umatilla Indian Reservation.	Riparian bottomland, major river in Douglas fir and Ponderosa pine forests.
• [illegible]							
593	WASCO	640.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: LEWIS WOODPECKER BIG GAME: WINTER RANGE	PINE-FIR FOREST OAK WOODLAND GRASSLAND	SITE-ACQUISITION.	Oak woodland, Ponderosa pine forest, and bunchgrass habitats.
*** OAK SPRINGS							
586	WASCO	320.00	3.5: TES-1; BIODIVERSITY-1; FISH-0.5; PRIORITYHAB-1; ONSITE-0	PACIFIC GIANT SALAMANDER ROUGH-SKINNED NEWT	RIPARIAN COLD SPRING BUNCHGRASSLAND	SITE-ACQUISITION, AND PUBLIC LAND ENHANCEMENT POTENTIAL.	A SERIES OF FAST FLOWING COLD SPRINGS ERUPT FROM A STEEP SLOPE, SURROUNDED BY RIPARIAN VEGETATION WITH WESTERN BIRCH DOM

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** PILOT ROCK GRASSLAND							
584	UMATILLA	120.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: CALIFORNIA QUAIL LONG-BILLED CURLEW	GRASSLAND	SITE-ACQUISITION. No major proponent.	Native bunchgrass prairie remnant in the Columbia Basin.
• ** PONY CREEK CANYON							
541	JEFFERSON	2000.00	4.5: TES-0; BIODIVERSITY-3; FISH-0.5; PRIORITYHAB-1; ONSITE-0		RIPARIAN ASPEN & BIRCH JUNIPER WOODLAND	SITE-ACQUISITION. Site boundaries poorly defined.	Juniper woodland, sagebrush steppe, canyon grassland and riparian bottomlands with aspen, birch and willow.
• ** PORT OF MORROW							
667	MORROW	80.00	2.0: TES-0; BIODIVERSITY-0; FISH-0.0; PROIRITYHAB-1; ONSITE-1	WATERFOWL UPLAND BIRDS NONGAME BIRDS	WETLAND	SITE-ACQUISITION (Addition to Umatilla NWR?).	Adjacent to Umatilla NWR.
• ** POWDER RIVER							
120	BAKER	1091.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: HERONS, YELLOW WARBLER, MINK, SPOTTED SANDPIPER WATERFOWL SENSITIVE SPECIES: SANDHILL CRANES SHOREBIRDS	WETLANDS RIPARIAN SAGEBRUSH ALKALINE WETLAND	SITE-ACQUISITION. Also includes public land enhancement on a USFWS conservation easement.	High quality valley bottom riparian ecosystem in northeastern Oregon.
• ** RAMSEY/FIFTEENMILE CREEK							
700	WASCO	3000.00	3.5: TES-0; BIODIVERSITY-1; FISH-0.5; PRIORITYHAB-1; ONSITE-1	TARGET SPECIES BIG GAME STEELHEAD CHINOOK ELK WINTER RANGE	RIPARIAN RIVERINE	SITE-ACQUISITION.	Riparian deer and elk winter range; only (?) native wild steelhead run east of Cascades, chinook spawning and rearing ha
*** ROCKPILE RANCH							
742	GRANT	3440.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: QUAIL, MALLARD, YELLOW WARBLER SENSITIVE SPECIES: SAGE GROUSE SONGBIRDS WATERFOWL ANADRAMOUS FISH BIG GAME: DEER AND ELK	RIPARIAN GRASSLAND	SITE-ACQUISITION.	3440 acres including 4 miles along South Fork John Day River, with riparian, juniper, sagebrush and some Ponderosa pine
• ** RUTHTON POINT							
539	HOOD RIVER	80.00	4.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-1	ENDANGERED SPECIES: BALD EAGLE TARGET SPECIES: HERON WATERFOWL SHOREBIRDS OSPREY	PINE-FIR FOREST RIPARIAN WETLAND	SITE-ACQUISITION.	Riparian hardwood and shallow water habitats for waterfowl, shorebirds, bald eagle, osprey, and herons.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** SERVICE CANYON GRASSLAND							
566	MORROW	500.00	2.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: YELLOW WARBLER BIG GAME: SENSITIVE SPECIES: BURROWING OWL	GRASSLAND	SITE-ACQUISITION. Area poorly defined.	Bunchgrass slopes in Columbia Basin.
• ** SEVEN MILE HILL							
595	WASCO	320.00	2.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-0; ONSITE-0	SENSITIVE SPECIES: LEWIS WOODPECKER TARGET SPECIES: CALIFORNIA QUAIL BIG GAME	PINE-FIR FOREST OAK WOODLAND GRASSLAND	SITE-ACQUISITION. Area poorly defined.	Ponderosa pine-Douglas fir forests with some Oregon oak woodlands and bunchgrasslands at the east end of the Columbia Ri
• ** SHARPS ISLAND							
574	SHERMAN	100.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON	RIPARIAN RIVERINE	SITE-ACQUISITION. Area poorly defined.	Great blue heron rookery with riparian habitats.
• ** SHEEP CREEK VALLEY							
612	UNION	5000.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: THREE-TOED WOODPECKER	WETLAND RIPARIAN	SITE-ACQUISITION. Important indholding in the National Forest, with major wildlife and fish val	Montane meadows, wetlands and riparian habitats in Ponderosa pine and Douglas fir forests.
• ** SILVER CREEK VALLEY							
870	HARNEY	12800.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: CALIFORNIA QUAIL, SPOTTED SANDPIPER, MULE DEER, YELLOW WARBLER SENSITIVE SPECIES: LONG-BILLED CURLEW, SANDHILL CRANE, BALD EAGLE SONGBIRDS WATERFOWL	RIPARIAN FOREST, SHRUBLAND, FORBLAND WET MEADOW SHRUB STEPPE/GRASS WETLAND	SITE-ACQUISITION. Area to be acquired and restored to protect riparian habitat and bird habitat	Large, wet valley at the southern edge of the Blue Mountains, with riparian habitat, rangelands, and meadows.
• ** SILVER LAKE							
669	HARNEY	947.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SHOREBIRDS WATERFOWL	WETLAND SHRUB/STEPPE COLD SPRING	SITE-ACQUISITION.	Large alkaline playa lake with associated wetlands, salt-desert scrub, and sagebrush steppe at the east end of the Malhe
• ** SILVIES VALLEY							
668	GRANT HARNEY	2000.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: SANDHILL CRANE WATERFOWL LONG-BILLED CURLEW	WETLAND	SITE-ACQUISITION AND ENHANCEMENT.	Willow riparian bottomland, with alkaline and non-alkaline wetlands and sagebrush steppe.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
. ** SOUTH FORK JOHN DAY RIVER							
561	GRANT		4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: WESTERN BLUEBIRD TARGET SPECIES: YELLOW WARBLER GREAT BLUE HERON	RIPARIAN JUNIPER WOODLAND SAGEBRUSH SHRUBLAND	AREA-ACQUISITION. Large area, with some well defined sites (Rockpile Ranch).	Riparian habitats with alder, birch and willow, sagebrush and juniper dominated uplands with patches of Ponderosa pine f
. ** SOUTH FORK WALLA WALLA RIVER							
578	UMATILLA	1000.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	BIG GAME: SENSITIVE SPECIES: THREE-TOED WOODPECKER MARGINED SCULPIN	RIPARIAN CONIFEROUS FOREST BUNCHGRASSLAND	SITE-ACQUISITION.	Grand fir-Douglas fir-Ponderosa pine forests with birch-alder riparian and bunchgrass slopes.
. ** SOUTH SLOPE IRON MOUNTAIN							
602	WHEELER	1500.00	4.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-0; ONSITE-0	SENSITIVE SPECIES: THREE-TOED WOODPECKER SCREECH OWL PINON MOUSE SAGEBRUSH VOLE	GRASSLAND JUNIPER WOODLAND	AREA-ACQUISITION.	ROLLING LANDSCAPE OF BUNCHGRASSES WITH SOME JUNIPER AND SHRUBS; NUMEROUS SPRINGS WITH COTTONWOODS AND WILLOWS. MANY ANIM
. **SPRAY							
605	WHEELER	200.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL	RIPARIAN RIVER ISLAND	SITE-ACQUISITION. Area poorly defined.	Riparian habitats, wetlands, a River Island along mainstem John Day River.
. ** SPRING CREEK							
618	WALLOWA	60.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: ? WHITE-TAILED DEER GREAT BLUE HERON	RIPARIAN QUAKING ASPEN	SITE-ACQUISITION.	Wetland, riparian woodland mix with quaking aspen, mountain alder, bog birch and tufted hairgrass, and springs, along th
. ** SPRING RIVER							
554	DESCHUTES	320.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0		WETLAND RIPARIAN	SITE-ACQUISITION. Area poorly defined, but adjacent to USFS lands.	Willow riparian and wetlands by the Dechutes River, surrounded by Ponderosa pine forests.
*** SQUAW CREEK BASIN							
869	UMATILLA	9839.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: CALIFORNIA QUAIL, MINK, DOWNY WOODPECKER, SPOTTED SANDPIPER, MULE DEER, RING-NECKED PHEASANT, YELLOW WARBLER BIG GAME: MULE DEER WINTER RANGE SONGBIRDS	RIVERINE SYSTEM CONIFER FOREST RIPARIAN FOREST, SHRUBLAND, AND FORBLAND SAND/GRAVEL/COBBLE/MUD	SITE-ACQUISITION. On the Umatilla Indian Reservation, area proposed for habitat improvement and	Riparian habitat in a forested-shrubland mosaic at the edge of the Blue Mountains

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** STEPHENSON LAKE							
546	JEFFERSON	120.00	3.0: TES-0; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-0; ONSITE-0		PINE FOREST MID ELEVATION LAKE	SITE-ACQUSITION.	Mid elevation lake surrounded by ponderosa pine forest.
• ** SUNFLOWER FLAT							
599	WASCO	1000.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0		PINE FOREST JUNIPER WOODLAND OAK WOODLAND	SITE-ACQUISITION. Area poorly defined.	Ponderosa pine forest-oak woodland-western juniper forest mosaic, with some native grasslands.
*** TAYLOR LAKE							
709	WASCO	250.00	3.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-1	WATERFOWL SHOREBIRDS OSPREY BALD EAGLE WINTER UPLAND GAME	WETLAND POND GRASSLAND	SITE-ACQUISITION.	Wetland, pond, and grass upland; waterfowl nesting and wintering, osprey, bald eagle winter, upland game, shorebirds.
• ** THOMASEN MEADOWS							
620	WALLOWA	100.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GREAT GRAY OWL	WETLAND	SITE-ACQUISITION. Area poorly defined.	Conifer forest and adjacent wetlands.
*** TOOLEY LAKE							
708	WASCO	40.00	3.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-1	WATERFOWL NESTING BIG GAME FISH REARING	WETLAND RIPARIAN POND	SITE-ACQUISITION. Also public land enhancements on State Park property.	Lake along I-84 and the Columbia River, with adjacent wetlands and riparian woodlands.
• ** TRAFTON WETLAND							
675	GILLIAM	1000.00	3.0: TES-0; BIODIVERSITY-1; FISH-0.0; PROIRITYHAB-1; ONSITE-1	WATERFOWL BIG GAME: DEER UPLAND BIRDS NONGAME BIRDS	WETLAND	SITE-ACQUISITION.	Private property with wetlands adjacent to Willow Creek WMA.
• ** TROUT CREEK CANYON							
542	JEFFERSON	1000.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	MERRIAM SHREW WHITE-TAILED JACKRABBIT	RIPARIAN	SITE-ACQUISITION.	Sagebrush steppe, canyon grasslands with some western Juniper, and riparian bottomlands with birch and alder.
• ** TULE LAKE							
725	WASCO	40.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL NESTING BIG GAME FISH REARING	WETLAND RIPARIAN POND	SITE-ACQUISITION. ALSO ENHANCEMENT ON THIS AND ADJACENT WARM SPRINGS TRIBAL LANDS.	Lake with adjacent wetlands in sagebrush-juniper steppe mosaic.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** TUMALO RESERVE							
315	DESCHUTES	500.00	1.0: TES-0; BIODIVERSITY-0; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL RAPTORS	WETLAND	SITE-ACQUISITION. Area poorly defined.	Mixed ponderosa pine-western juniper woodland and sagebrush-bitterbrush steppe, with wetlands and old lake beds.
• ** TWELVEMILE CREEK GRASSLAND							
553	CROOK	300.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	PRONGHORN	GRASSLAND SAGEBRUSH SHRUBLAND RIPARIAN	SITE-ACQUISITION. Area poorly defined.	COMMUNITIES OF SAGEBRUSH AND BUNCHGRASS IN GOOD CONDITION ARE USED AS WINTER RANGE FOR PRONGHORN AND PROVIDES HABITAT FO
• ** TWELVEMILE TABLE AND LAKE BASIN							
552	CROOK	1000.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SAGE GROUSE PRONGHORN DEER	GRASSLAND SHRUBLAND	SITE-ACQUISITION. Area poorly defined.	Sagebrush steppe, bunchgrass mosaic with occasional juniper.
• ** TWIN LAKE							
611	UNION	500.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL RING-NECKED DUCK	WETLAND LAKE	SITE-ACQUISITION.	Wetland and lake in bunchgrass, Ponderosa pine mosaic on a ridge at the edge of the Grande Ronde Valley.
• ** TYGH RIDGE SUMMIT							
588	WASCO	1000.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	HAWKS	BUNCHGRASSLAND	SITE-ACQUISITION. Area poorly defined.	Bunchgrass slopes mixed with biscuit scablands.
*** UMATILLA RIVER - MOUTH TO PENDLETON							
650	UMATILLA		5.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-1	BIG GAME: SENSITIVE SPECIES: THREE-TOED WOODPECKER	RIPARIAN BUNCHGRASSLAND SAGEBRUSH STEPPE	AREA-ACQUISITION. Major river area, need more definition of mitigation opportunities and needs.	Columbia Basin riparian with cottonwood, birch, alder and red-osier dogwood, and adjacent sagebrush and bunchgrass slope
• ** UMATILLA RIVER-FROM PENDLETON TO SQUAW CREEK							
649	UMATILLA		4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	BIG GAME: SENSITIVE SPECIES: THREE-TOED WOODPECKER ANADRAMOUS FISH	RIPARIAN BUNCHGRASSLAND SAGEBRUSH STEPPE	AREA-ACQUISITION. Major river area, need more definition of mitigation opportunities and needs.	Columbia Basin riparian with cottonwood, birch, alder and red-osier dogwood, and adjacent sagebrush and bunchgrass slope

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
. ** UPPER COTTONWOOD CREEK							
575	UMATILLA		4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	ELK SENSITIVE SPECIES:?	RIPARIAN	AREA-ACQUISITION. Major stream basin area, need more definition of □itigation opportunities and	Columbia Basin riparian and adjacent sagebrush, bunchgrass slopes and forests.
*** UPPER LOSTINE RIVER							
617	WALLOWA	120.00	3.5: TES-0; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON	RIPARIAN	SITE-ACQUISITION.	Heron rookery in cottonwood forest along Lostine River, below wilderness.
*** VIENTO							
707	HOOD RIVER	40.00	4.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-1	WATERFOWL BIG GAME SHOREBIRDS ENDANGERED SPECIES: BALD EAGLE FISH REARING	RIPARIAN WETLAND POND	SITE-ACQUISITION.	Wetlands, ponds and riparian adjacent to Columbia River in the gorge.
. ** WALLOWA LAKE EAST MORAINE							
615	WALLOWA	750.00	5.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0	GRAY-CROWNED ROSY FINCH WHITE-TAILED JACKRABBIT WHITE-TAILED DEER	GRASSLAND SHRUBLAND SUBALPINE LAKE	SITE-ACQUISITION. High priority site.	Bunchgrass slopes and some pine woodlands and sagebrush on the terminal and lateral moranes of Wallowa Lake.
. ** WARM SPRINGS CREEK							
717	GRANT	1000.00	4.5: TES-0; BIODIVERSITY 3; FISH-0.5; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: YELLOW WARBLER, MINK BIG GAME: MULE DEER SONGBIRDS	WILLOW RIPARIAN BUNCHGRASSLANDS JUNIPER WOODLANDS SAGEBRUSH STEPPE/GRASS	SITE-ACQUISITION. Area not yet well defined.	Willow riparian in mix of sagebrush steppe, juniper woodlands and bunchgrass slopes.
. ** WARM SPRINGS VALLEY							
676	HARNEY	300.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SHOREBIRDS WATERFOWL	WETLAND SHRUB/STEPPE LAKE HOT SPRING	SITE-ACQUISITION.	Lake and hot springs with surrounding sagebrush steppe and some salt desert shrub with hot spring.
. ** WATERMAN FLAT							
601	WHEELER	200.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SAGE GROUSE		SITE-ACQUISITION.	Sagebrush and bunchgrass area, with sagegrouse lek.
. ** WEST FORK BUTTE CREEK MACROSITE							
718	WHEELER	15600.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: YELLOW WARBLERS, DEER, QUAIL, MINK SENSITIVE SPECIES: BIG GAME: DEER SONGBIRDS	RIPARIAN SHRUB STEPPE/GRASS BUNCHGRASS WESTERN JUNIPER	SITE-ACQUSITION.	The site is an entire creek drainage, at the boundary between the High Lava Plains and the Columbia Basin. It includes r

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** WHITE RIVER & TYGH CREEK CONFLUENCE							
587	WASCO	2000.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	BIG GAME WATERFOWL TARGET SPECIES: GREAT BLUE HERON SONGBIRDS UPLAND BIRDS MINK HERPS	RIPARIAN RIVERINE RIVER ISLAND	SITE-ACQUISITION. Area may not be for sale, and if acquired would need enhancement and restorat	EXTENSIVE RIPARIAN WOODLAND OF BLACK COTTONWOOD, ALDER, AND BIRCH WITH UNDERSTORY VARYING FROM AN OPEN PARKLAND TO DENSE
*** WILLOW CREEK-GRAND RONDE							
844	UNION	240.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: MINK, YELLOW WARBLER, MULE DEER SONGBIRDS SHOREBIRDS	RIPARIAN TUFTED HAIRGRASS WETLAND SAGEBRUSH/BUNCHGRASS STEPPE	SITE-ACQUISITION. Area needs acquistion. Composed of a number of private parcels, which may or	Valley riparian, wetland complex in the Grande Ronde Valley. With black hawthorn-willow woodlands and tufted hairgrass m
• **WYETH							
706	HOOD RIVER	80.00	4.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-1	ENDANGERED SPECIES: BALD EAGLE WATERFOWL SHOREBIRDS FISH	RIPARIAN POND	SITE-ACQUISITION.	Riparian community and ponds with waterfowl nesting and wintering, shorebirds, fish rearing, and bald eagles.
• ** ZUMWALT PRAIRIE							
40	WALLOWA	5000.00	5.0: TES-1; BIODIVERSITY-3; FISH-0.0; PRIORITYHAB-1; ONSITE-0	ELK RAPTORS SENSITIVE SPECIES: WHITE-TAILED JACKRABBIT, FERRUGINOUS HAWK, SWAINSON HAWK	GRASSLAND RIPARIAN QUAKING ASPEN PINE FOREST	AREA-ACQUISITION. Half of site badly disturbed a s result of grazing or current/past farming act	Prairie on large flat plateau west of Imnaha River Canyon and NE of Wallowa River Valley; altitude varies from 4500-5200

125 Records Processed

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** BLACK CANYON							
604	WHEELER	1600.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	BLUEBIRDS SONGBIRDS	RIPARIAN GRASSLAND JUNIPER WOODLAND	SITE-PUBLIC LAND ENHANCEMENT. RECENTLY ACQUIRED BY BLM, PERHAPS NOT SUITABLE DUE TO MINIMAL RES	RIPARIAN CANYON WITH WILLOW AND CHOKECHERRY. UPLANDS WITH JUNIPER/BUNCHGRASS AND SOME LOW SAGEBRUSH. EXCELLENT CONDITION
*** BOARDMAN SLOUGH							
565	MORROW	1000.00	5.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-1	WATERFOWL SHOREBIRDS GREAT BLUE HERON MARSHBIRDS PAINTED TURTLES	RIPARIAN WETLAND	SITE-PUBLIC LAND ENHANCEMENT. SLOUGH CONSTRUCTION AND RESTORATION.	SLOUGH ALONG COLUMBIA RIVER, WITH WETLANDS AND RIPARIAN HABITATS, SOME SANDY UPLANDS.
• ** BRIDGE CREEK WMA							
583	UMATILLA		3.5: TES-1; BIODIVERSITY-1; FISH-0.5; PRIORITYHAB-1; ONSITE-0	ELK DEER SENSITIVE SPECIES: UPLAND SANDPIPER, T&E SALMONIDS	SHRUB STEPPE/GRASS PONDEROSA PINE RIPARIAN	AREA-PUBLIC LAND ENHANCEMENT. NO MITIGATION PLANS PROPOSED AT THIS SITE TO DATE.	MIXED SHRUB STEPPE/GRASSLAND, PONDEROSA PINE WOODLAND WITH SOME BRIDGE CREEK RIPARIAN.
• ** CATHERINE CREEK							
614	UNION		4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	GREAT BLUE HERON	RIPARIAN WETLAND GRASSLAND	AREA-PUBLIC LAND ENHANCEMENT. Some potential acquisition may be necessary. No specific projects	Mountain alder-hawthorn riparian in Ponderosa pine and douglas fir forests, with some canyon grasslands and sagebrush st
• ** COLD SPRINGS NWR							
581	UMATILLA	40.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL SHOREBIRDS MARSHBIRDS WHITE PELICAN LONG-BILLED CURLEW WESTERN BURROWING OWL	WETLAND	SITE-PUBLIC LAND ENHANCEMENT. SPECIFIC MITIGITATION PROPOSAL NOT PRESENTED FOR THIS SITE. MAY H	
• ** COLE ISLAND							
626	HARNEY	200.00	2.0: TES-1; BIODIVERSITY-0; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: SANDHILL CRANE WATERFOWL LONG-BILLED CURLEW	WETLAND	SITE-PUBLIC LAND MITIGATION	Long narrow island protruding into Malheur Lake (a remnant dike).
*** COLUMBIA RIVER MILE 250							
628	GILLIAM	150.00	2.0: TES-0; BIODIVERSITY-0; FISH-0.0; PROIRITYHAB-1; ONSITE-1	WATERFOWL SHOREBIRDS	RIVERINE	SITE-PUBLIC LAND ENHANCEMENT.	Dredge deep channel between islands and shore at RM 250 to benefit waterfowl and shorebirds.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
*** COLUMBIA RIVER MILE 255							
629	MORROW	40.00	2.0: TES-0; BIODIVERSITY-0; FISH-0.0; PROIRITYHAB-1; ONSITE-1	WATERFOWL SHOREBIRDS FORSTERS TERNS CASPIAN TERNS	RIVERINE	SITE-PUBLIC LAND ENHANCEMENT.	Dredge channel through west break water at Threemile Island, RM 255 to benefit waterfowl and shorebirds.
*** COLUMBIA RIVER MILE 265							
631	MORROW	50.00	2.0: TES-0; BIODIVERSITY-0; FISH-0.0; PROIRITYHAB-1; ONSITE-1	WATERFOWL SHOREBIRDS	RIVERINE	SITE-PUBLIC LAND ENHANCEMENT.	Construct islands at RM 265 to benefit waterfowl and shorebirds; adjacent to John Day WMA.
** COLUMBIA RIVER MILE 273-276							
632		100.00	2.0: TES-0; BIODIVERSITY-0; FISH-0.0; PROIRITYHAB-1; ONSITE-1	WATERFOWL SHOREBIRDS	RIVERINE	SITE-PUBLIC LAND ENHANCEMENT	Riprap islands to protect from erosion; sand dredged from shallow areas to elevate the islands and benefit waterfowl and
** COLUMBIA RIVER MILE 283-285							
639	MORROW	160.00	2.0: TES-0; BIODIVERSITY-0; FISH-0.0; PROIRITYHAB-1; ONSITE-1	WATERFOWL	RIVERINE	SITE-PUBLIC LAND ENHANCEMENT.	Construct islands near Oregon shore that provide nesting for waterfowl and protect shorelinefrom● rosion; adjacent to I
** COLUMBIA RIVER MILE 284							
642	MORROW	80.00	2.0: TES-0; BIODIVERSITY-0; FISH-0.0; PROIRITYHAB-1; ONSITE-1	WATERFOWL BIG GAME: DEER	RIPARIAN	SITE-PUBLIC LAND ENHANCEMENT.	Create forage areas for goslings; benefits waterfowl and deer. Adjacent to Irrigon WMA.
*** COLUMBIA RIVER MILE 299							
643	UMATILLA	30.00	3.0: TES-0; BIODIVERSITY-1; FISH-0.0; PROIRITYHAB-1; ONSITE-1	WATERFOWL SHOREBIRDS FURBEARERS	RIPARIAN RIVERINE	SITE-PUBLIC LAND ENHANCEMENT.	Dredge channels between islands and shoreline at River Mile 299, adjacent to Hat Rock State Park.
** COW CREEK, HARNEY							
871	HARNEY	5120.00	4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	TARGET SPECIES: CALIFORNIA QUAIL, YELLOW WARBLER SENSITIVE SPECIES: REDBAND TROUT, SAGE GROUSE SONGBIRDS	RIPARIAN FOREST, SHRUBLAND RIVERINE	SITE-PUBLIC LAND ENHANCEMENT. Restoration and enhancement of disturbed riparian, for redband tr	Riparian bottom and valley at the edge of the Basin and Range and Blue Mountains.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ✉ IRRIGON WMA							
568	MORROW UMATILLA	240.00	4.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-1	WATERFOWL: GEESE SHOREBIRDS LONG-BILLED CURLEW	ALKALINE WETLAND	SITE-PUBLIC LAND ENHANCEMENTS. NOT WELL DEFINED TO DATE.	Alkaline wetlands, bottomlands, willow riparian and steppe, along Columbia River. Areas with Russian Olive and canary gr
*** MAINSTEM MALHEUR RIVER							
652	HARNEY	40.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: REDBAND TROUT, BULL TROUT	RIPARIAN	SITE-PUBLIC LAND ENHANCEMENT.	Riparian woodland in steppe/bunchgrass canyon.
• ** MALHEUR LAKE NORTH SHORE							
658	HARNEY	1200.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: SANDHILL CRANE BIG GAME: DEER TRUMPETER SWAN	RIPARIAN WETLAND SHRUBLAND	SITE-PUBLIC LAND ENHANCEMENT.	Wetlands, alkaline bottomlands, wildrye, lakeshore and riparian habitats along Malheur Lake.
• ** MCKAY CREEK NWR							
582	UMATILLA	640.00	3.0: TES-0; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL SHOREBIRDS MARSHBIRDS	WETLAND	SITE-PUBLIC LAND ENHANCEMENT. NO DISTINCT PROPOSALS.	Developed reservoir and wetlands, with farmland, some riparian and steppe.
• ** MIDDLE FORK MALHEUR RIVER							
660	HARNEY		3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: REDBAND TROUT RAINBOW TROUT MT WHITEFISH	RIPARIAN	AREA-PUBLIC LAND ENHANCEMENTS, WITH SOME POTENTIAL ACQUISITIONS.	Site includes 27 river miles of riparian habitat, including cottonwood, willow, birch and alder riparian, in steppe and
*** MITCHELL POINT							
702	HOOD RIVER	80.00	4.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-1	ENDANGERED SPECIES: PEREGRINE FALCON NEST	TALUS SHRUBLAND	SITE-PUBLIC LAND ENHANCEMENT.	Forest and cliff-talus habitat with peregrine falcon nest site.
• ** MURDERERS CREEK WMA							
563	GRANT		4.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	BIG GAME: WINTER RANGE TARGET SPECIES: MEADOWLARKS, YELLOW WARBLER, MINK SONGBIRDS SENSITIVE SPECIES: ?	RIPARIAN BUNCHGRASSLAND	SITE-PUBLIC LAND ENHANCEMENT. NO SPECIFIC PROPOSALS PRESENTED FOR THIS SITE.	Riparian bottomland, sagebrush steppe and some juniper and ponderosa pine canyons.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
*** NORTH FORK JOHN DAY RIVER							
585	UMATILLA	2000.00	5.5: TES-1; BIODIVERSITY-3; FISH-0.5; PRIORITYHAB-1; ONSITE-0	ANADROMOUS FISH	RIPARIAN	AREA-PUBLIC LAND ENHANCEMENT, WITH MINOR ACQUISITIONS. Mostly public land, with limited mitigat	Riparian habitat, high gradient, with important anadramous fishery, in Ponderosa pine-juniper woodlands and bunchgrass d
*** NORTH FORK MALHEUR RIVER							
677			3.5: TES-0; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0	ANADRAMOUS FISH SONGBIRDS SENSITIVE SPECIES: BIG GAME	RIPARIAN	AREA-PUBLIC LAND ENHANCEMENT.	Willow, alder and birch riparian in Ponderosa pine and sagebrush steppe mosaic.
*** PLAYA LAKES							
666	HARNEY	500.00	2.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SHOREBIRDS WATERFOWL	WETLAND	SITE-PUBLIC LAND ENHANCEMENTS. Project includes two tracts on BLM land.	Playa lakes in Harney Lake Basin.
. ** RUFUS WETLAND							
701	SHERMAN	100.00	5.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-1	ENDANGERED SPECIES: BALD EAGLE WATERFOWL SHOREBIRDS BIG GAME FURBEARERS FISH REARING	WETLAND RIPARIAN POND ISLAND	SITE-PUBLIC LAND ENHANCEMENT WITH SOME POTENTIAL ACQUISITION.	Island and rivershore wetlands, riparian shrub, and ponds providing habitat for waterfowl, shorebirds, furbearers, big g
. ** STINKING WATER CREEK							
673	HARNEY	3000.00	3.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-0	SENSITIVE SPECIES: REDBAND TROUT	RIPARIAN	SITE-PUBLIC LAND ENHANCEMENTS.	Desert riparian habitats with adjacent sagebrush steppe.
. ** SUTTON MOUNTAIN							
22	WHEELER	300.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0		JUNIPER WOODLAND BUNCHGRASSLAND TALUS SHRUBLAND	SITE-PUBLIC LAND ENHANCEMENT, AND ACQUISITIONS. Recently acquired by the BLM, may not be approp	Juniper woodlands, sagebrush (low and big) steppe, native grasslands, and seasonal streams, with towering basalt cliffs,
. ** THE DALLES PORT							
704	WASCO	100.00	4.0: TES-1; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-1	WATERFOWL SHOREBIRDS BALD EAGLE UPLAND BIRD	WETLAND POND RIPARIAN	SITE-PUBLIC LAND ENHANCEMENT.	Wetland riparian with ponds by Columbia River.

NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
• ** THREE MILE ISLAND							
564	MORROW	100.00	3.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-1	SHOREBIRDS TARGET SPECIES: CANADA GOOSE CASPIAN TERNS FORSTERS TERNS	RIVERINE	SITE-PUBLIC LAND ENHANCEMENT. ODFW, NE region, proposes RIPRAP and island stabilization.	Columbia River island habitat in Columbia Basin.
• ** TOM MCCALL SITE AT ROWENA PLATEAU							
31	WASCO	200.00	3.0: TES-0; BIODIVERSITY-1; FISH-0.0; PRIORITYHAB-1; ONSITE-1	SONGBIRDS RAPTORS	POND GRASSLAND WETLAND PINE-FIR FOREST	SITE-PUBLIC LAND ENHANCEMENT. Includes management and improvement on Forest Service, State Park	Columbia Gorge meadowlands contain several species of raptors, songbirds, and wildflowers; large variety of botanical en
• ** UMATILLA NWR							
569	MORROW		5.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-1	WATERFOWL BALD EAGLE GOLDEN EAGLE WHITE PELICAN SEABIRDS OSPREY WESTERN BURROWING OWL GREAT BLUE HERON NIGHT HERON SHOREBIRDS MARSHBIRDS	WETLAND	SITE-PUBLIC LAND ENHANCEMENTS. Includes proposed mitigation projects from the USFWS.	Islands and shoreline of Columbia River below the McNary Dam, including sandy sagebrush and bitterbrush steppe, wetlands
• ** WELLS ISLAND							
540	HOOD RIVER	20.00	5.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-1	WATERFOWL HERON BALD EAGLE	WETLAND RIPARIAN RIVERINE	SITE-PUBLIC LAND ENHANCEMENT.	Riparian vegetation and shallow water provide habitat for waterfowl nesting, heron rookery, and bald eagles.
• ✉ WENAHA WMA							
624	WALLOWA	6000.00	4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	ENDANGERED SPECIES SENSITIVE SPECIES SONGBIRDS BIG GAME BALD EAGLE WESTERN RATTLESNAKE AMERICAN OSPREY GOLDEN EAGLE BOHEMIAN WAXWING CATBIRD ROCKY MOUNTAIN PINE GROSBEAK WHITE-TAILED DEER MARTEN OTTER ELK	RIPARIAN GRASSLAND SHRUBLAND	SITE-PUBLIC LAND ENHANCEMENT.	Big game wintering habitat; excellent fish habitat for trout and Dolly Varden.

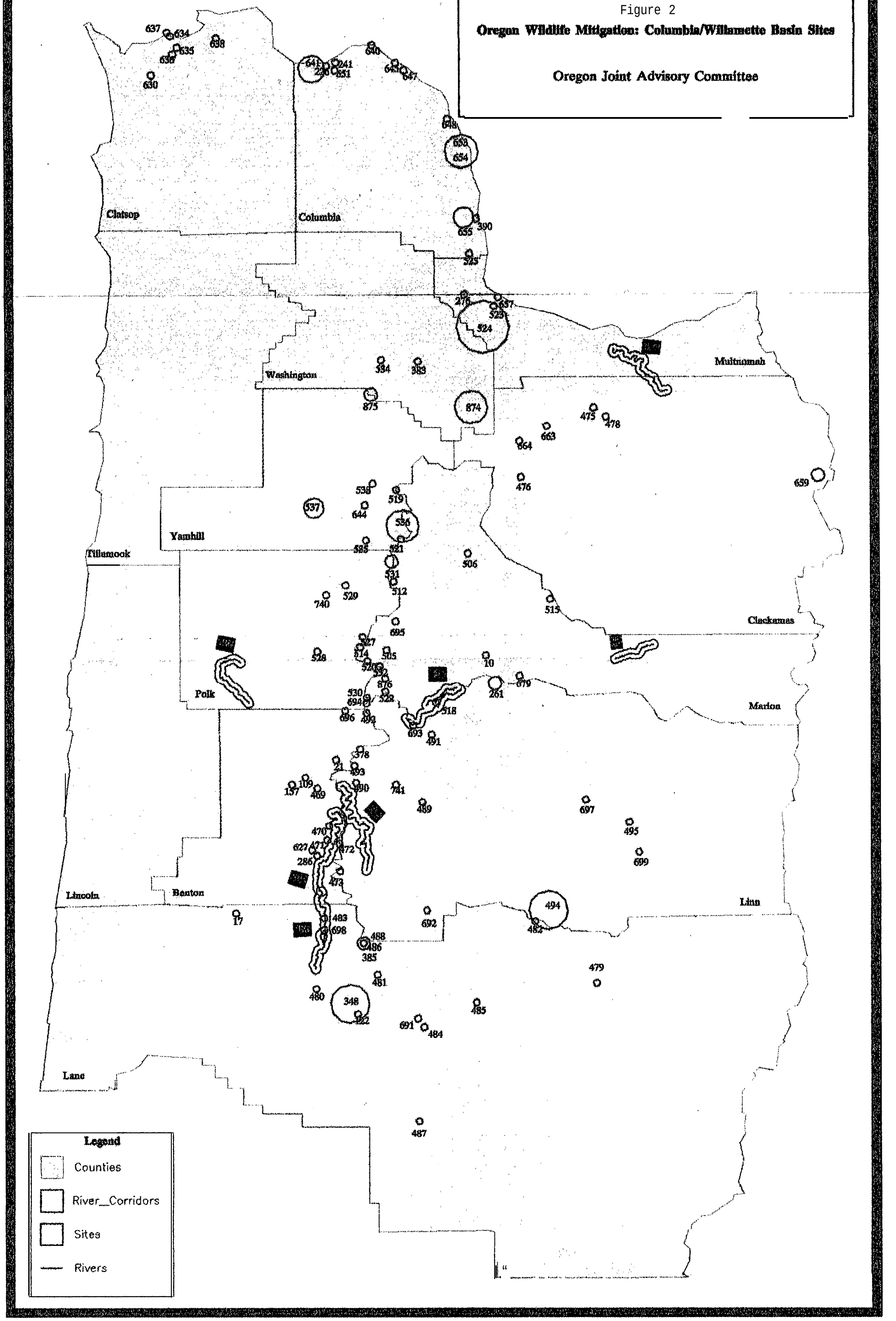
NUM	COUNTYNAME	ACRES	PRIORITY	SPECIES	HABITAT	SITECOM	SITEDESC
. ** WHITE RIVER CANYON							
590	WASCO		3.5: TES-1; BIODIVERSITY-2; FISH-0.5; PRIORITYHAB-1; ONSITE-0		GRASSLAND RIPARIAN DOUGLAS FIR FOREST	AREA-PUBLIC LAND ENHANCEMENTS AND ACQUSITIONS. Project is not well defined, but has significant	
*** WHITE RIVER WMA							
598	WASCO		4.0: TES-1; BIODIVERSITY-2; FISH-0.0; PRIORITYHAB-1; ONSITE-0	WATERFOWL BALD EAGLE GOLDEN EAGLE FERRUGINOUS HAWK WESTERN BURROWING OWL GRAY-CROWNED ROSY FINCH WHITE-TAILED JACKRABBIT SAGEBRUSH VOLE BAND-TAILED PIGEON ELK	RIPARIAN GRASSLAND CONIFEROUS FOREST	SITE-PUBLIC LAND ENHANCEMENT. No mitigation activities proposed at this site to date.	Mixed Ponderosa pine-Douglas fir forest, oak woodland, grassland with riparian habitats.

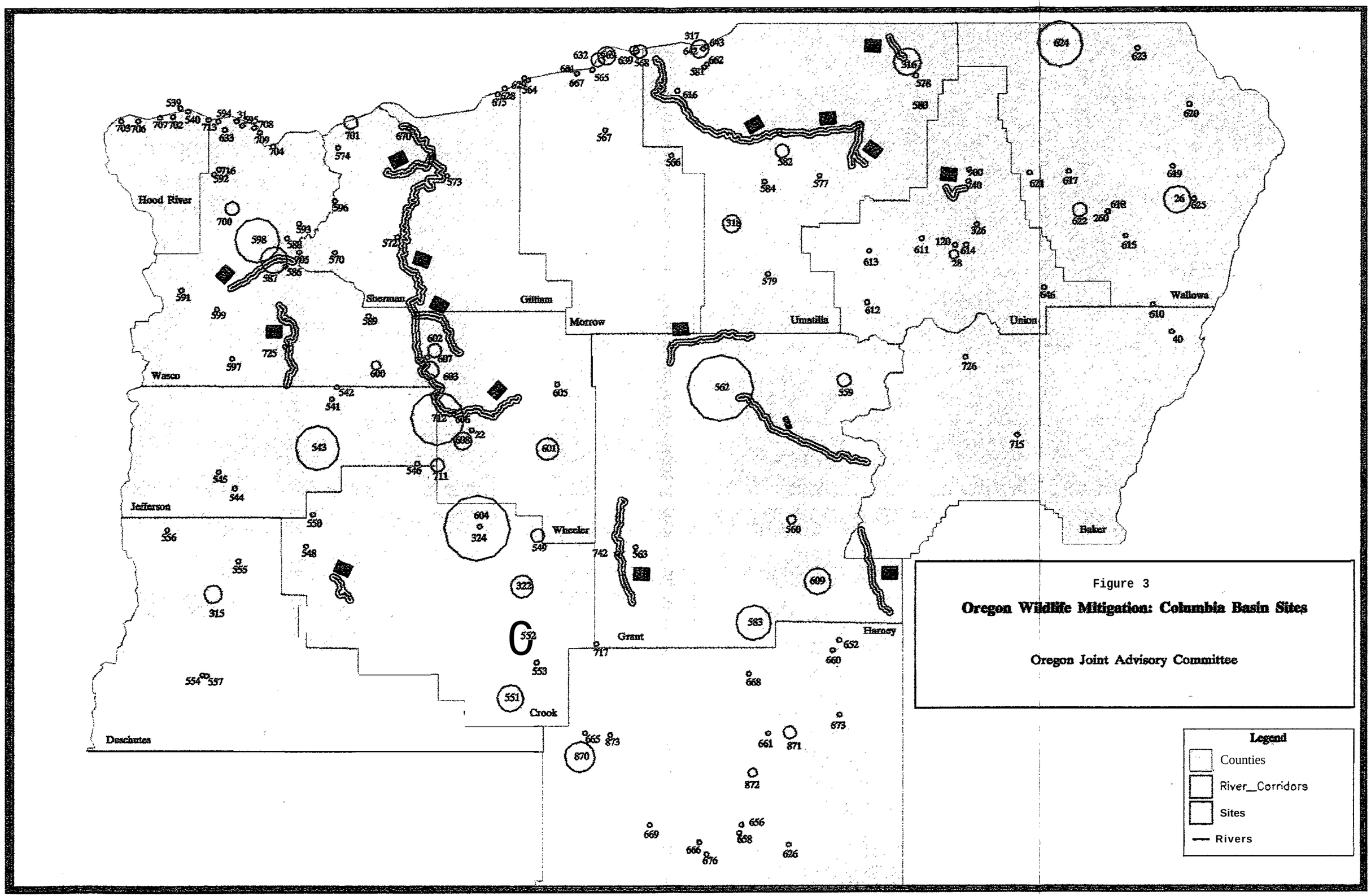
35 Records Processed

Figure 2

Oregon Wildlife Mitigation: Columbia/Willamette Basin Sites

Oregon Joint Advisory Committee




Hood River
Sherman
Gilliam
Morrow
Umatilla
Union
Wallowa
Wasco
Jefferson
Wheeler
Grant
Harney
Baker
Deschutes
Crook
Figure 3
Oregon Wildlife Mitigation: Columbia Basin Sites
Oregon Joint Advisory Committee
Legend
Counties
River_Corridors
Sites
Rivers